XR-CA400/CA420X

SERVICE MANUAL

Ver 1.2 2001.06

US Model
Canadian Model
XR-CA400
E Model
XR-CA420X

Photo: XR-CA400

Model Name Using Similar Mechanism	XR-C5300X/C5600X
Tape Transport Mechanism Type	MG-25F-136

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS (US model)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION
23 watts per channel minimum continuous average power into 4 ohms, 4 channels driven from 20 Hz to 20 kHz with no more than 5 % total harmonic distortion.

Other specifications

Cassette player section

Tape track	4-track 2-channel stereo
Wow and flutter	0.08 % (WRMS)
Frequency response	30 – 18,000 Hz
Signal-to-noise ratio	

Cassette type	
TYPE II, IV	61 dB
TYPE I	58 dB

Tuner section

FM

Tuning range	
XR-CA400 :	87.5 – 107.9 MHz
XR-CA420X:	FM tuning interval: 50 kHz/200 kHz switchable 87.5 – 108.0 MHz (at 50 kHz step) 87.5 – 107.9 MHz (at 200 kHz step)
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz
Usable sensitivity	11 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo), 68 dB (mono)
Harmonic distortion at 1 kHz	0.7 % (stereo), 0.5 % (mono)
Separation	33 dB at 1 kHz
Frequency response	30 – 15,000 Hz

AM

Tuning range	
XR-CA400 :	530 – 1,710 kHz
XR-CA420X:	AM tuning interval: 9 kHz/10 kHz switchable 531 – 1,602 kHz (at 9 kHz step) 530 – 1,710 kHz (at 10 kHz step)
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz/450 kHz
Sensitivity	30 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	50 W × 4 (at 4 ohms)

General

Outputs	Audio output Power antenna relay control lead Power amplifier control lead
Tone controls	
XR-CA400 :	Bass ±10 dB at 20 Hz Treble ±10 dB at 20 kHz
XR-CA420X:	Bass ±9 dB at 100 Hz Treble ±9 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 178 × 50 × 178 mm ($7\frac{1}{8} \times 2 \times 7\frac{1}{8}$ in.) (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 161 mm ($7\frac{1}{4} \times 2\frac{1}{8} \times 6\frac{3}{8}$ in.) (w/h/d)
Mass	Approx. 1.2 kg (2 lb 10 oz)
Supplied accessories	Parts for installation and connections (1 set) Front panel case (1)

Design and specifications are subject to change without notice.

FM/AM CASSETTE CAR STEREO

9-870-236-13
2001F0500-1

© 2001.6

Sony Corporation
e Vehicle Company
Shinagawa Tec Service Manual Production Group

SONY®

TABLE OF CONTENTS

1. GENERAL
Location of Controls 3
Setting the Clock 3

2. DISASSEMBLY 8

3. ASSEMBLY OF MECHANISM DECK 10

4. MECHANICAL ADJUSTMENTS 13

5. ELECTRICAL ADJUSTMENTS
Tape Deck Section 13
Tuner Section 13

6. DIAGRAMS
6-1. Note for Printed Wiring Boards and Schematic Diagrams 14
6-2. Printed Wiring Board – MAIN Board – 16
6-3. Schematic Diagram – MAIN Board (1/3) – 17
6-4. Schematic Diagram – MAIN Board (2/3) – 18
6-5. Schematic Diagram – MAIN Board (3/3) – 19
6-6. Printed Wiring Board – KEY Board – 20
6-7. Schematic Diagram – KEY Board – 21
6-8. IC Pin Function Description 22

7. EXPLODED VIEWS 24

8. ELECTRICAL PARTS LIST 27

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

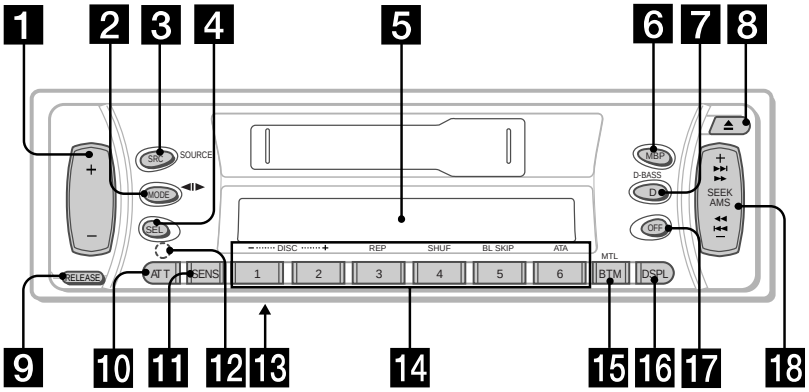
Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

SECTION 1
GENERAL

This section is extracted from instruction manual.

Location of controls



Refer to the pages listed for details.

1 Volume +/– button 7, 10

2 MODE (◄I►) button
During tape playback:
Playback direction change 7, 8
During radio reception:
BAND select 9
During CD/MD playback:
CD/MD unit select 12

3 SRC (SOURCE) (TUNER/TAPE/CD/MD) button 7, 9, 12

4 SEL (select) button 7, 10, 11, 12, 13

5 Display window

6 MBP (My Best sound Position) button 12

7 D (D-BASS) button 11

8 ⏏ (eject) button 7

9 RELEASE (front panel release) button 6, 15

10 ATT (attenuate) button 10

11 SENS button 10

12 RESET button (located on the front side of the unit behind the front panel) 6

13 Frequency select switch (located on the bottom of the unit) (XR-CA420X)
See "Frequency select switch" in the Installation/Connections manual.

14 Number buttons 8, 9, 11, 13, 14
During radio reception:
Preset number select 9
During tape playback:
③ REP 8
⑤ BL SKIP 8
⑥ ATA 8
During CD/MD playback:
① DISC – 13
② DISC + 13
③ REP 14
④ SHUF 14

15 BTM/MTL (Best Tuning Memory/Metal) button 8, 9

16 DSPL (display mode change) button 7, 12, 13

17 OFF button* 6, 7

18 SEEK/AMS +/– button 8, 9, 10, 13
Seek 10
Automatic Music Sensor 8, 13
Manual search 13

* **Warning when installing in a car without ACC (accessory) position on the ignition key switch**
Be sure to press (OFF) on the unit for two seconds to turn off the clock display after turning off the engine.
When you press (OFF) momentarily, the clock display does not turn off and this causes battery wear.

Setting the clock

The clock uses a 12-hour digital indication.

Example: To set the clock to 10:08

1 Press (DSPL) for two seconds.

The hour indication flashes.

❶ Press either side of the volume button to set the hour.

to go forward

to go back

❷ Press (SEL).

The minute indication flashes.

❸ Press either side of the volume button to set the minute.

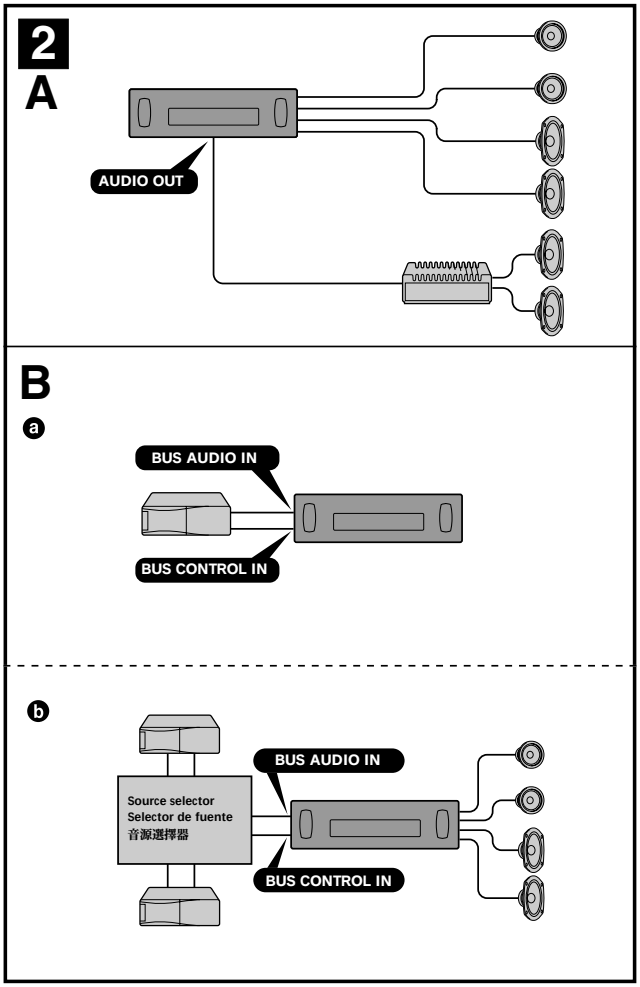
to go forward

to go back

2 Press (DSPL).

The clock starts.

After the clock setting is complete, the display returns to normal playback mode.

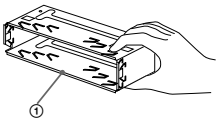


Parts list (1)

The numbers in the list are keyed to those in the instructions.

Caution

Handle the bracket ① carefully to avoid injuring your fingers.



Cautions

- This unit is designed for negative earth 12 V DC operation only.
- Do not get the wires under a screw, or caught in moving parts (e.g. seat railing).
- Before making connections, disconnect the earth terminal of the car battery to avoid short circuits.
- Connect the **yellow** and **red** power input leads only after all other leads have been connected.
- **Run all earth wires to a common earth point.**
- Be sure to insulate any loose unconnected wires with electrical tape for safety.

Notes on the power supply cord (yellow)

- When connecting this unit in combination with other stereo components, the connected car circuit's rating must be higher than the sum of each component's fuse.
- When no car circuits are rated high enough, connect the unit directly to the battery.

Connection example (2)

***Notes* (2-A)**

- *Be sure to connect the earth cord before connecting the amplifier.*
- *If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.*

***Tip* (2-B-b)**

For connecting two or more changers, the source selector XA-C30 (optional) is necessary.

Connection diagram (3)

❶ **To a metal surface of the car**
First connect the black earth lead, then connect the yellow and red power input leads.

❷ **To the power aerial control lead or power supply lead of aerial booster amplifier**
Notes
- *It is not necessary to connect this lead if there is no power aerial or aerial booster, or with a manually-operated telescopic aerial.*
- *When your car has a built-in FM/AM (MW/SW) aerial in the rear/side glass, see "Notes on the control and power supply leads."*

❸ **To AMP REMOTE IN of an optional power amplifier**
This connection is only for amplifiers. Connecting any other system may damage the unit.

❹ **To the +12 V power terminal which is energised in the accessory position of the ignition key switch**
Notes
- *If there is no accessory position, connect to the +12 V power (battery) terminal which is energised at all times.*
  Be sure to connect the black earth lead to it first.
- *When your car has a built-in FM/AM (MW/SW) aerial in the rear/side glass, see "Notes on the control and power supply leads."*

❺ **To the +12 V power terminal which is energised at all times**
Be sure to connect the black earth lead to it first.

Notes on the control and power supply leads

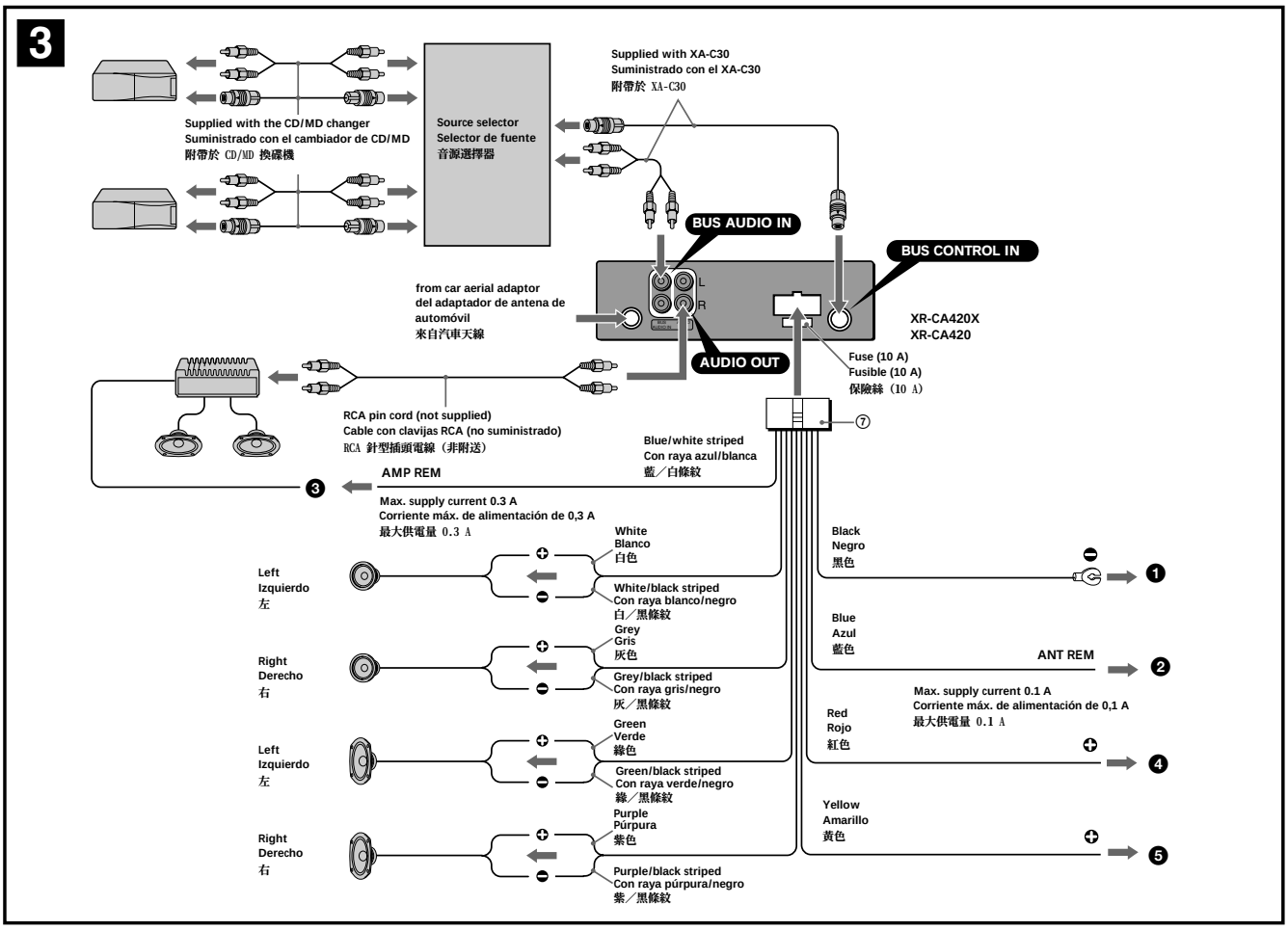
- *The power aerial control lead (blue) supplies +12 V DC when you turn on the tuner.*
- *When your car has built-in FM/AM (MW/SW) aerial in the rear/side glass, connect the power aerial control lead (blue) or the accessory power input lead (red) to the power terminal of the existing aerial booster. For details, consult your dealer.*
- *A power aerial without relay box cannot be used with this unit.*

Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

Notes on speaker connection

- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities to avoid its damage.*
- *Do not connect the speaker terminals to the car chassis, or connect the terminals of the right speakers with those of the left speaker.*
- *Do not connect the earth lead of this unit to the negative (–) terminal of the speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Connect only passive speakers. Connecting active speakers (with built-in amplifiers) to the speaker terminals may damage the unit.*

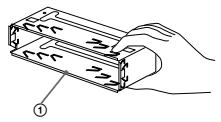


Lista de componentes (1)

Los números de la lista corresponden a los de las instrucciones.

Precaución

Tenga mucho cuidado al manipular el soporte ① para evitar posibles lesiones en los dedos.



Precauciones

- Esta unidad ha sido diseñada para alimentarse con 12 V CC, negativo a masa, solamente.
- No coloque los cables debajo de ningún tornillo, ni los aprisione con partes móviles (p.ej. los raíles del asiento).
- Antes de realizar las conexiones, desconecte el terminal de puesta a masa de la batería del automóvil a fin de evitar cortocircuitos.
- Conecte los cables de entrada de alimentación **amarillo** y **rojo** solamente después de haber conectado los demás.
- **Conecte todos los conductores de puesta a masa a un punto común.**
- Por razones de seguridad, asegúrese de aislar con cinta eléctrica los cables sueltos que no estén conectados.

Notas sobre el cable de suministro de alimentación (amarillo)

- Cuando conecte esta unidad en combinación con otros componentes estéreo, la capacidad nominal del circuito conectado del automóvil debe ser superior a la suma del fusible de cada componente.
- Si no hay circuitos del automóvil con capacidad nominal suficientemente alta, conecte la unidad directamente a la batería.

Ejemplo de conexiones (2)

***Notas* (2-A)**

- *Asegúrese de conectar primero el cable de puesta a masa antes de realizar la conexión al amplificador.*
- *Si conecta un amplificador de potencia opcional y no utiliza el incorporado, los pitidos se desactivarán.*

***Consejo* (2-B-ⓑ)**

Cuando desee conectar dos o más cambiadores, necesitará un selector de fuente XA-C30 (opcional).

Diagramas de conexión (3)

❶ **A una superficie metálica del automóvil**
Conecte primero el cable de masa negro, y después los cables amarillo y rojo de entrada de alimentación,para obtener información detallada.

❷ **Al cable de control de la antena motorizada o al cable de fuente de alimentación del amplificador de antena**
Notas
- *Si no se dispone de antena motorizada ni de amplificador de antena, o se utiliza una antena telescópica accionada manualmente, no será necesario conectar este cable.*
- *Si el automóvil incorpora una antena de FM/AM (MW/SW) en el cristal trasero/lateral, consulte "Notas sobre los cables de control y de fuente de alimentación".*

❸ **Para conectar a AMP REMOTE IN del amplificador de potencia opcional**
Esta conexión es sólo para amplificadores. La conexión de cualquier otra sistema puede dañar la unidad.

❹ **Al terminal de alimentación de +12 V que recibe energía en la posición de accesorios del interruptor de la llave de encendido**
Notas
- *Si no hay posición de accesorios, conéctelo al terminal de alimentación (batería) de +12 V que recibe energía sin interrupción. Asegúrese de conectar primero el cable de masa negro.*
- *Si el automóvil incorpora una antena de FM/AM (MW/SW) en el cristal trasero/lateral, consulte "Notas sobre los cables de control y de fuente de alimentación".*

❺ **Al terminal de alimentación de +12 V que recibe energía sin interrupción**
Asegúrese de conectar primero el cable de masa negro.

Notas sobre los cables de control y de fuente de alimentación

- *El conductor de control de la antena motorizada (azul) suministrará +12 V CC cuando conecte la alimentación del sintonizador.*
- *Si el automóvil dispone de una antena de FM/AM (MW/SW) incorporada en el cristal trasero/lateral, conecte el cable de control de antena motorizada (azul) o el cable de entrada de alimentación auxiliar (rojo) al terminal de alimentación del amplificador de antena existente. Para obtener información detallada, consulte a su proveedor.*
- *Con esta unidad no es posible utilizar una antena motorizada sin caja de relé.*

Conexión para protección de la memoria

Si conecta el conductor de entrada amarillo, el circuito de la memoria recibirá siempre alimentación, incluso aunque ponga la llave de encendido en la posición OFF.

Notas sobre la conexión de los altavoces

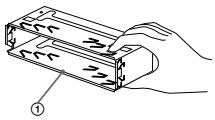
- *Antes de conectar los altavoces, desconecte la alimentación de la unidad.*
- *Utilice altavoces con una impedancia de 4 a 8 ohmios con la capacidad de potencia adecuada para evitar que se dañen.*
- *No conecte los terminales de altavoz al chasis del automóvil, ni conecte los terminales del altavoz derecho con los del izquierdo.*
- *No conecte el cable de puesta a tierra de esta unidad al terminal negativo (–) del altavoz.*
- *No intente conectar los altavoces en paralelo.*
- *Conecte solamente altavoces pasivos. Si conecta altavoces activos (con amplificadores incorporados) a los terminales de altavoz, puede dañar la unidad.*

零件一覽表（1）

圖示數字與說明書中的數字是一致的。

注意

移動裝卸支架 ① 時，請特別注意別傷到手指。



注意

- 本機只能使用負極接地 12 V 直流電源。
- 不要使導線夾在螺栓下，或繞掛在移動部件上（如：座椅扶手上）。
- 連接前，先拔去汽車電池的接地端子，以免發生短路。
- **黃色**和**紅色**電源輸入導線必須在所有其它導線都連接完畢以後才連接。
- **將所有地線都連接到同一接地點。**
- 為了安全，請確認把沒有連接的導線用電器膠帶包紮進行絕緣。

電源導線須知（黃色）

- 將本機與其它立體聲裝置相連接時，所連接的汽車電路容量必須大於每個裝置保險絲容量的總和。
- 當汽車電路容量不夠大時，請將本機直接與電池相連接。

線路連接圖例（2）

***註*（2-A）**

- *務必在接放大器之前連接地線。*
- *如果您連接了選購件的功率放大器而不使用內裝的放大器，將無哪聲功能。*

***要領*（2-B-ⓑ）**

若要連接 2 臺或 2 臺以上換碟機時，必須使用音源選擇器 XA-C30（選購件）。

線路連接圖（3）

❶ **至汽車的金屬部位**
首先連接黑色接地導線，然後再連接黃色和紅色電源輸入導線。

❷ **至電動天線控制導線或天線升壓放大器的電源導線**
註
- *如無電動天線，增壓器，或用手操作的套管式天線，便不須連接此導線。*
- *您的汽車的後／側玻璃窗中如果內裝有 FM/AM (MW/SW) 天線，即請參看 " 控制和電源線須知 "。*

❸ **至選購的功率放大器的 AMP REMOTE IN（放大器遙控輸入）**
本連接僅用於放大器。連接任何其它系統可能會損壞本機。

❹ **至在點火鑰匙的輔助位置上通電的 +12 V 電源端子**
註
- *若沒有輔助位置，則請連接至常時通電的 +12 V 電源（電池）端子。務請首先將黑色接地導線與其連接。*
- *您的汽車的後／側玻璃窗中如果內裝有 FM/AM (MW/SW) 天線，即請參看 " 控制和電源線須知 "。*

❺ **至隨時都通電的 +12 V 電源端子**
務請首先將黑色接地導線與其連接。

控制和電源線須知

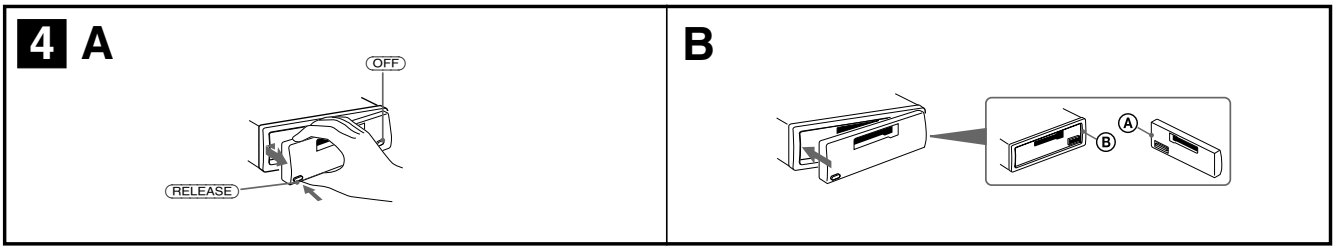
- *接通調諧器電源時，電動天線的控制導線（藍色）便能提供 +12 V 直流電。*
- *若您的汽車後／側玻璃窗上有內置 FM/AM (MW/SW) 天線，須將電動天線控制導線（藍色）或輔助電源輸入導線（紅色）連接到現有天線放大器上的電源端子上。詳細內容請向銷售商詢問。*
- *本機不能使用不具備繼電箱的電動天線。*

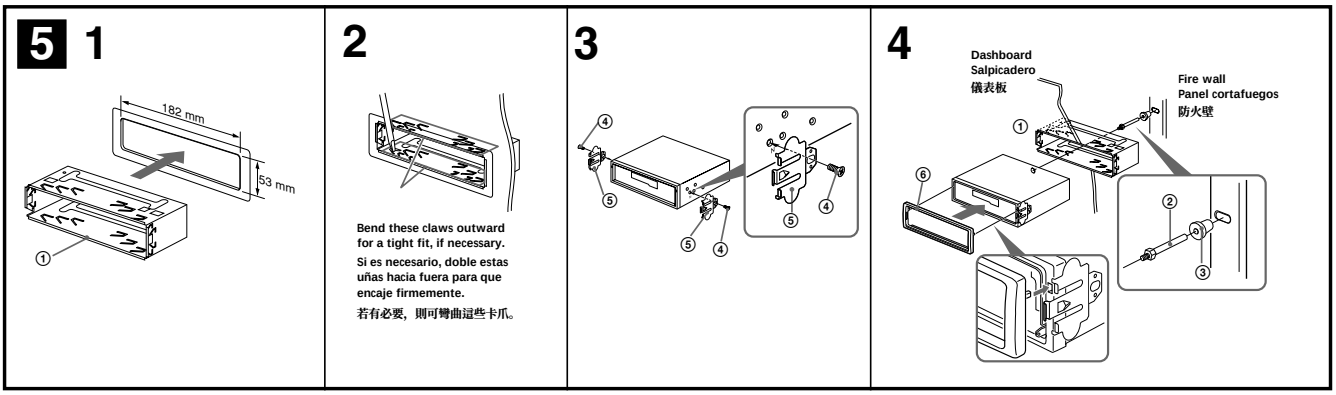
保持記憶的線路連接法

當連接好黃色電源輸入導線時，即使汽車發動機點火鑰匙被轉在電源切斷之處，電源仍繼續將電流供給記憶用電路，以保持所記憶著的數據。

連接揚聲器時的注意事項

- *連接揚聲器電線以前，請先切斷本機電源。*
- *使用阻抗為 4-8Ω 且具有充分功率處理容量的揚聲器，以免損壞揚聲器。*
- *不要將揚聲器端子連接到汽車底盤上或將右揚聲器端子與左揚聲器端子相連接。*
- *切勿將本機的接地導線連接至揚聲器的負(-)接線柱。*
- *揚聲器不可平行連接。*
- *請僅連接無源揚聲器。若將有源揚聲器（帶內置放大器）連接到揚聲器端子上會損壞本機。*





Precautions

- Choose the installation location carefully so that the unit will not interfere with normal driving operations.
- Avoid installing the unit in areas subject to dust, dirt, excessive vibration, or high temperatures, such as in direct sunlight or near heater ducts.
- Use only the supplied mounting hardware for a safe and secure installation.

Mounting angle adjustment

Adjust the mounting angle to less than 60°.

How to detach and attach the front panel (4)

Before installing the unit, detach the front panel.

4-A To detach

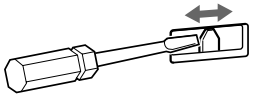
Before detaching the front panel, be sure to press (OFF). Press (RELEASE), then slide the front panel to the right side, and pull out the left side.

4-B To attach

Attach part Ⓐ of the front panel to part Ⓑ of the unit as illustrated and push the left side into position until it clicks.

Frequency select switch

The AM (FM) tuning interval is factory-set to the 10 k (200 k) position. If the frequency allocation system of your country is based on 9 kHz (50 kHz) interval, set the switch on the bottom of the unit to the 9 k (50 k) position before making connections.



Mounting example (5)

Installation in the dashboard

Mounting the unit in a Japanese car (6)

You may not be able to install this unit in some makes of Japanese cars. In such a case, consult your Sony dealer.

Note

To prevent malfunction, install only with the supplied screws ④.

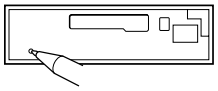
Warning when installing in a car without ACC (accessory) position on the ignition key switch

Be sure to press (OFF) on the unit for two seconds to turn off the clock display after turning off the engine.

When you press (OFF) only momentarily, the clock display does not turn off and this causes battery wear.

RESET button

When the installation and connections are completed, be sure to press the RESET button with a ballpoint pen, etc.



Precauciones

- Elija cuidadosamente el lugar de montaje de forma que la unidad no interfiera las funciones normales de conducción.
- Evite instalar la unidad donde pueda quedar sometida a altas temperaturas, como a la luz solar directa o al aire caliente de calefacción, o a polvo, suciedad, o vibraciones excesivas.
- Para realizar una instalación segura y firme, utilice solamente la ferretería de montaje suministrada.

Ajuste del ángulo de montaje

Ajuste el ángulo de montaje a menos de 60°.

Forma de extraer e instalar el panel frontal (4)

Antes de instalar la unidad, extraiga el panel frontal.

4-A Para extraerlo

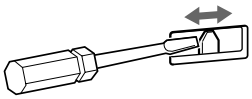
Antes de extraer el panel frontal, ciérorese de presionar (OFF). Después presione (RELEASE) a fin de abrirlo, después deslícelo hacia la derecha, y por último tire de su parte izquierda.

4-B Para instalarlo

Coloque el orificio Ⓐ del panel frontal en el eje Ⓑ de la unidad, como se muestra en la ilustración, y después presione la parte izquierda.

Selector de frecuencia

El intervalo de sintonía de AM (FM) ha sido ajustado en fábrica a la posición 10 k (200 k). Si el sistema de asignación de frecuencias de su país se basa en el intervalo de 9 kHz (50 kHz), ponga este selector, situado en la base de la unidad, en la posición 9 k (50 k) antes de realizar las conexiones.



Ejemplo de montaje (5)

Instalación en el salpicadero

Montaje de la unidad en un automóvil japonés (6)

Usted no podrá instalar esta unidad en algunos automóviles japoneses. En tal caso, consulte a su proveedor Sony.

Nota

Para evitar que se produzcan fallos, realice la instalación solamente con los tornillos suministrados ④.

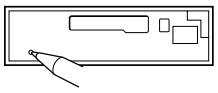
Advertencia sobre la instalación en un automóvil que no disponga de posición ACC (accesorios) en el interruptor de la llave de encendido

Asegúrese de pulsar (OFF) en la unidad durante dos segundos para desactivar la indicación del reloj después de apagar el motor.

Si pulsa (OFF) sólo momentáneamente, la indicación del reloj no se desactivará y esto causará el desgaste de la batería.

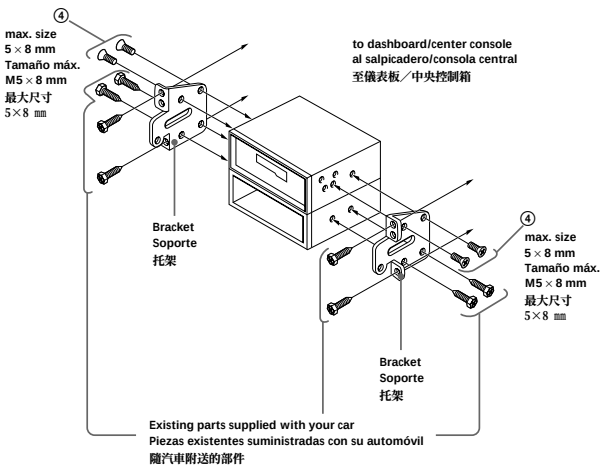
Botón RESET

Cuando finalice la instalación y las conexiones, cerciórese de pulsar el botón RESET con un bolígrafo, etc.



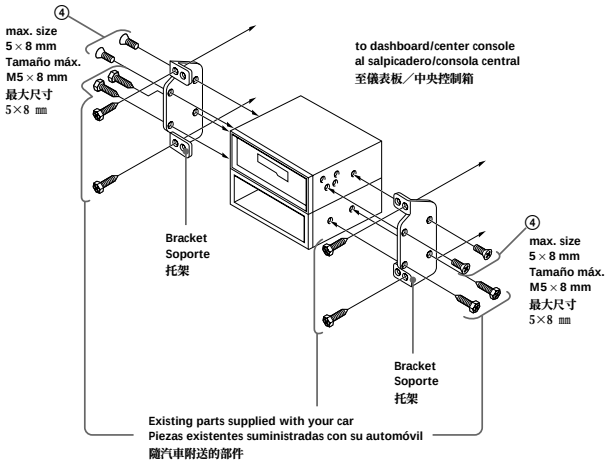
6 A

TOYOTA



B

NISSAN



使用前注意事項

- 本機請放在不妨礙司機駕駛之處。
- 避免將本機放在高溫之處，如陽光直接照射、暖氣機前、或灰塵極多、髒亂，以及極易受震動等地方。
- 為了安全起見，安裝時請使用附送的部件。

安裝角度之調整

請在 60 度以內調整安裝角度。

如何拆卸和裝配前板（4）

安裝本機之前，請先拆卸前板。

4-A 拆卸

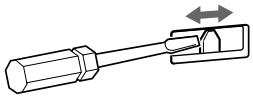
拆卸前面板之前，須先按下 (OFF) 鍵。
然後，按下 (RELEASE) 鍵以便開啟前面板，將前面板稍微向右邊滑動，然後從前面板的左側拉出。

4-B 裝配

如圖所示，將前板的 Ⓐ 處對準本機的 Ⓑ 處，然後將左側推入直至聽到喀嗒聲。

頻率選擇開關

AM（FM）調諧間隔在出廠前被設定在 10 k（200 k）位置上。若貴國的頻率分配系統是以 9 kHz（50 kHz）間隔為基礎的，連接前，請將本機底部上的開關設定在 9 k（50 k）位置上。



安裝示例（5）

安裝在儀錶板裡

將本機安裝於日本產汽車上時（6）

有的日本產汽車不能安裝本機，在這種情形下，請您向當地的 Sony 經銷商諮詢。

註

為防止發生故障，安裝時只能使用附送的螺絲 ④。

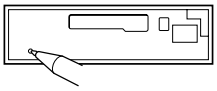
安裝在點火鑰匙開關上沒有 ACC（輔助）位置的汽車上時的警告

在關掉汽車引擎之後，一定請按下機器上的 (OFF) 兩秒以關掉時鐘顯示。

如果只短暫地按一下 (OFF)，將不會關掉時鐘顯示而浪費電池。

RESET 按鈕

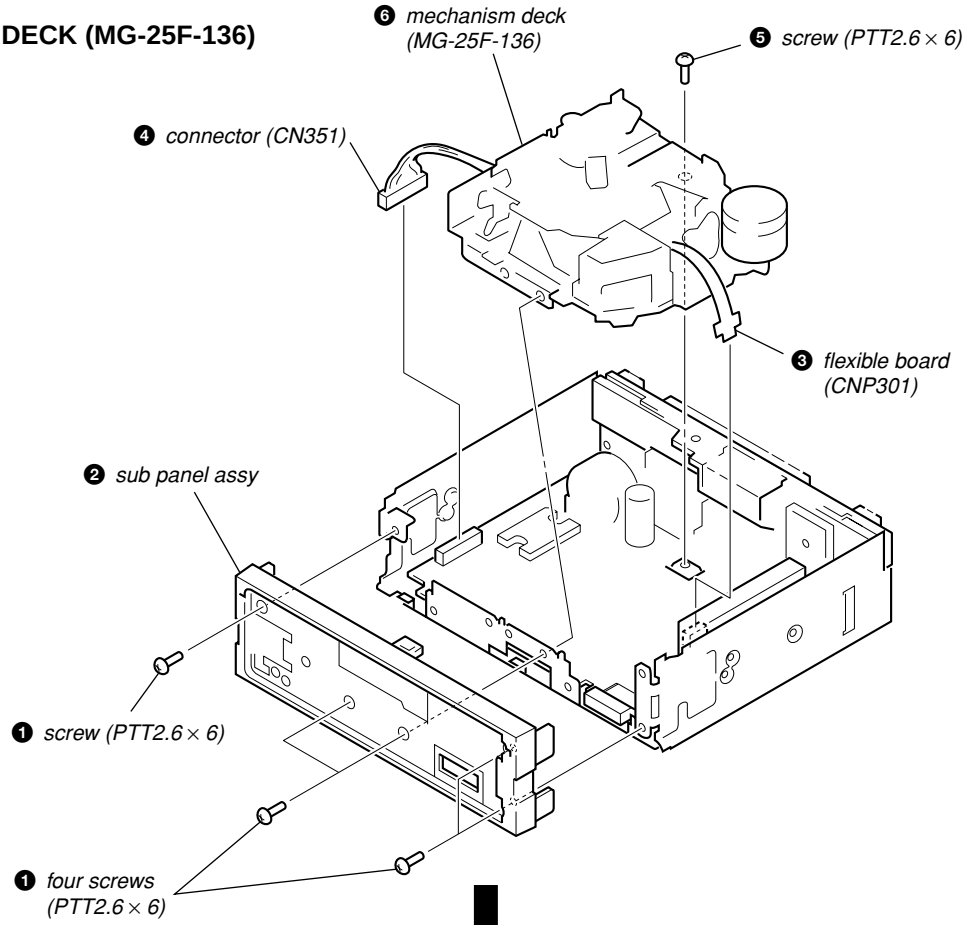
當安裝和連接完成後，務請用圓珠筆等按壓 RESET 按鈕。



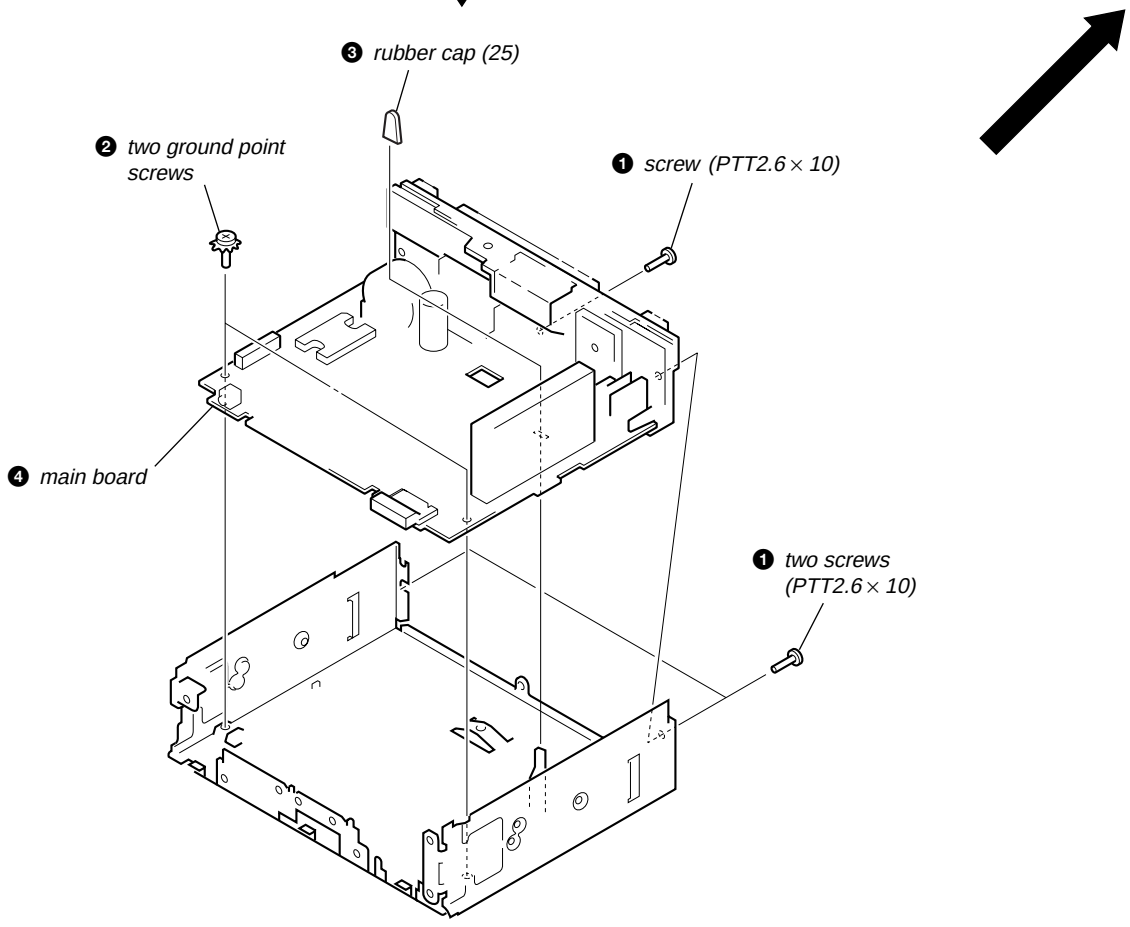
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

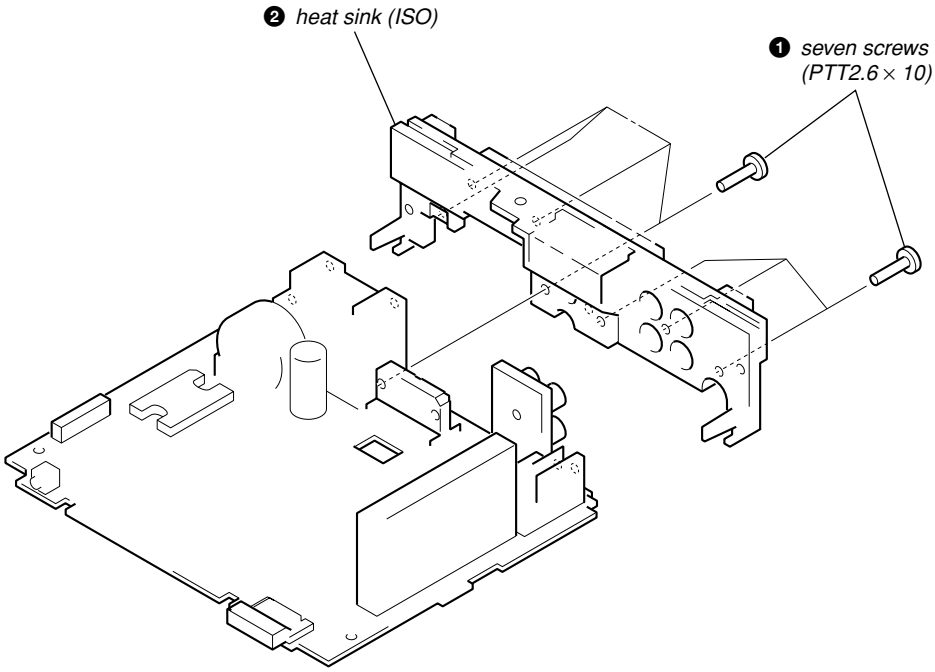
MECHANISM DECK (MG-25F-136)


❻ mechanism deck (MG-25F-136)
❺ screw (PTT2.6 × 6)
❹ connector (CN351)
❸ flexible board (CNP301)
❷ sub panel assy
❶ screw (PTT2.6 × 6)
❶ four screws (PTT2.6 × 6)

MAIN BOARD



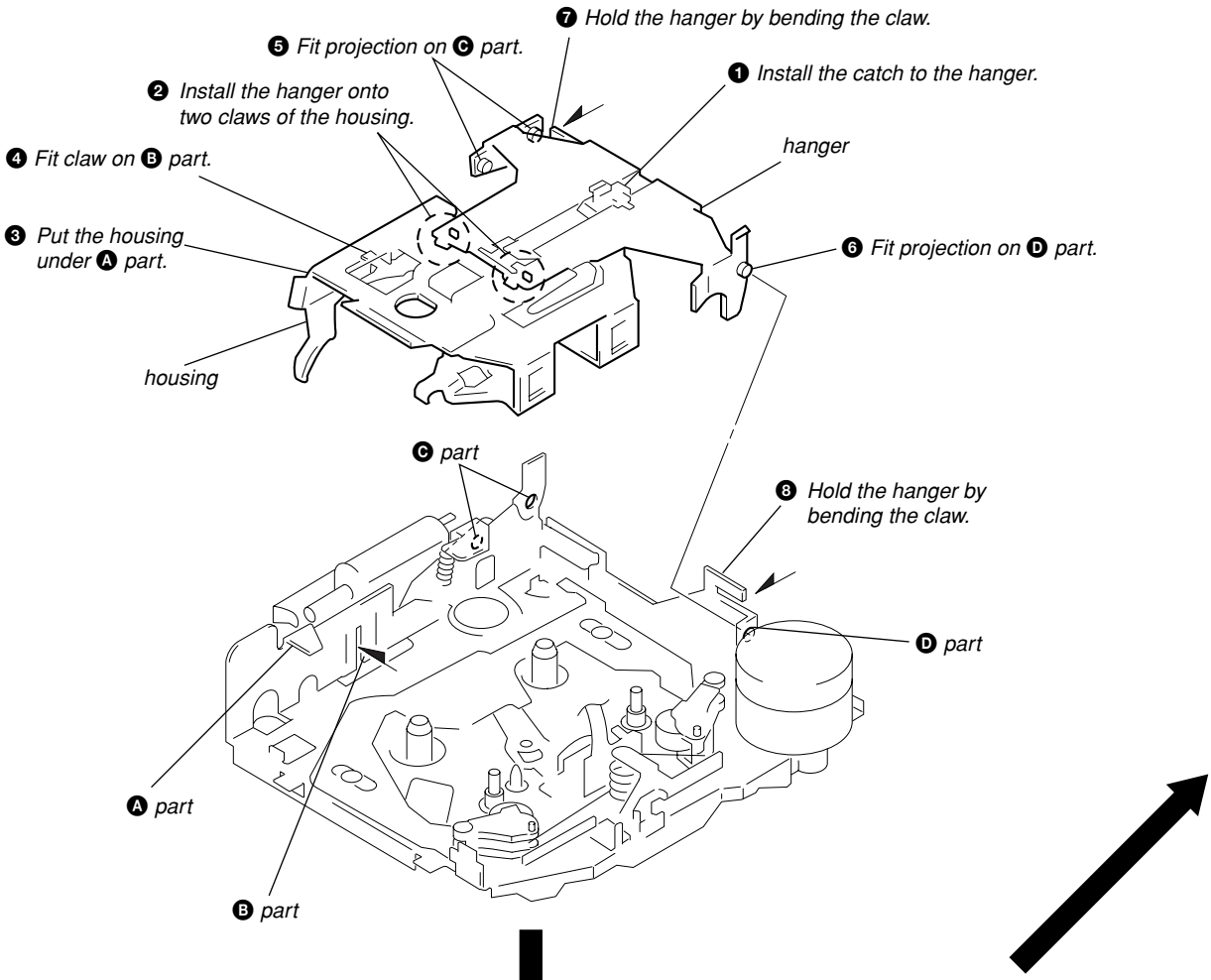
HEAT SINK (ISO)



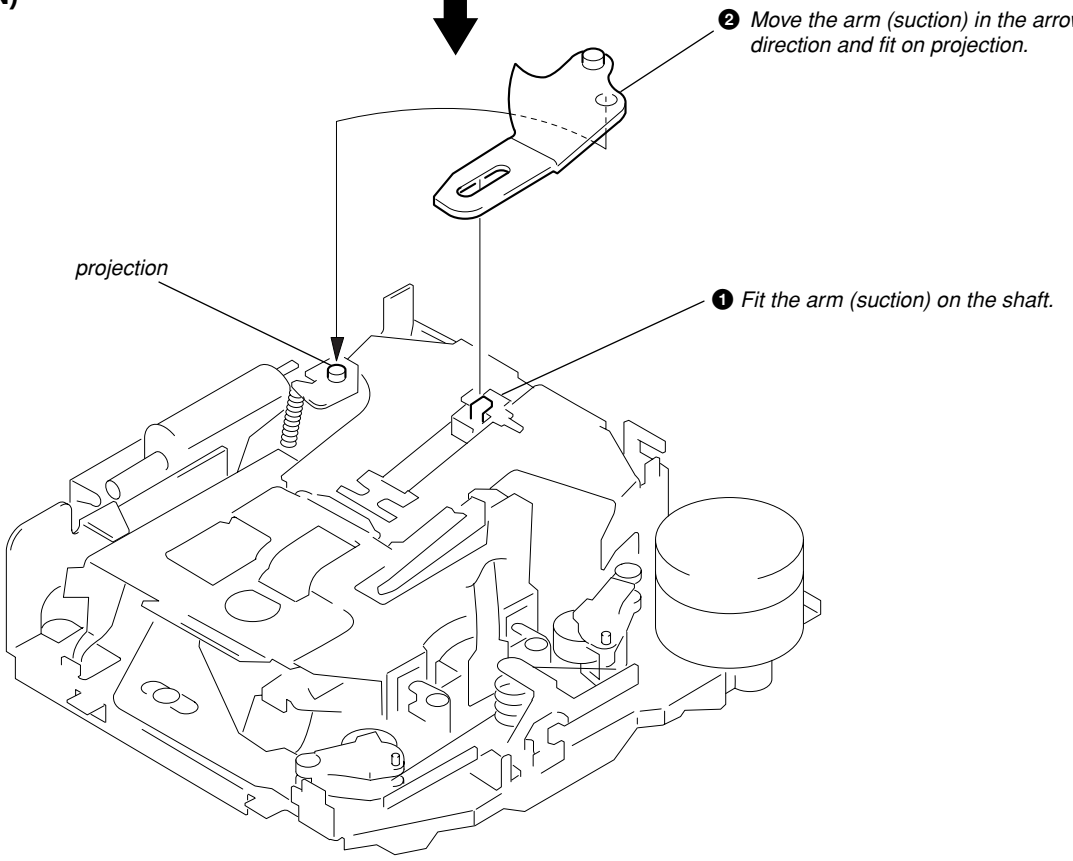
SECTION 3
ASSEMBLY OF MECHANISM DECK

Note: Follow the assembly procedure in the numerical order given.

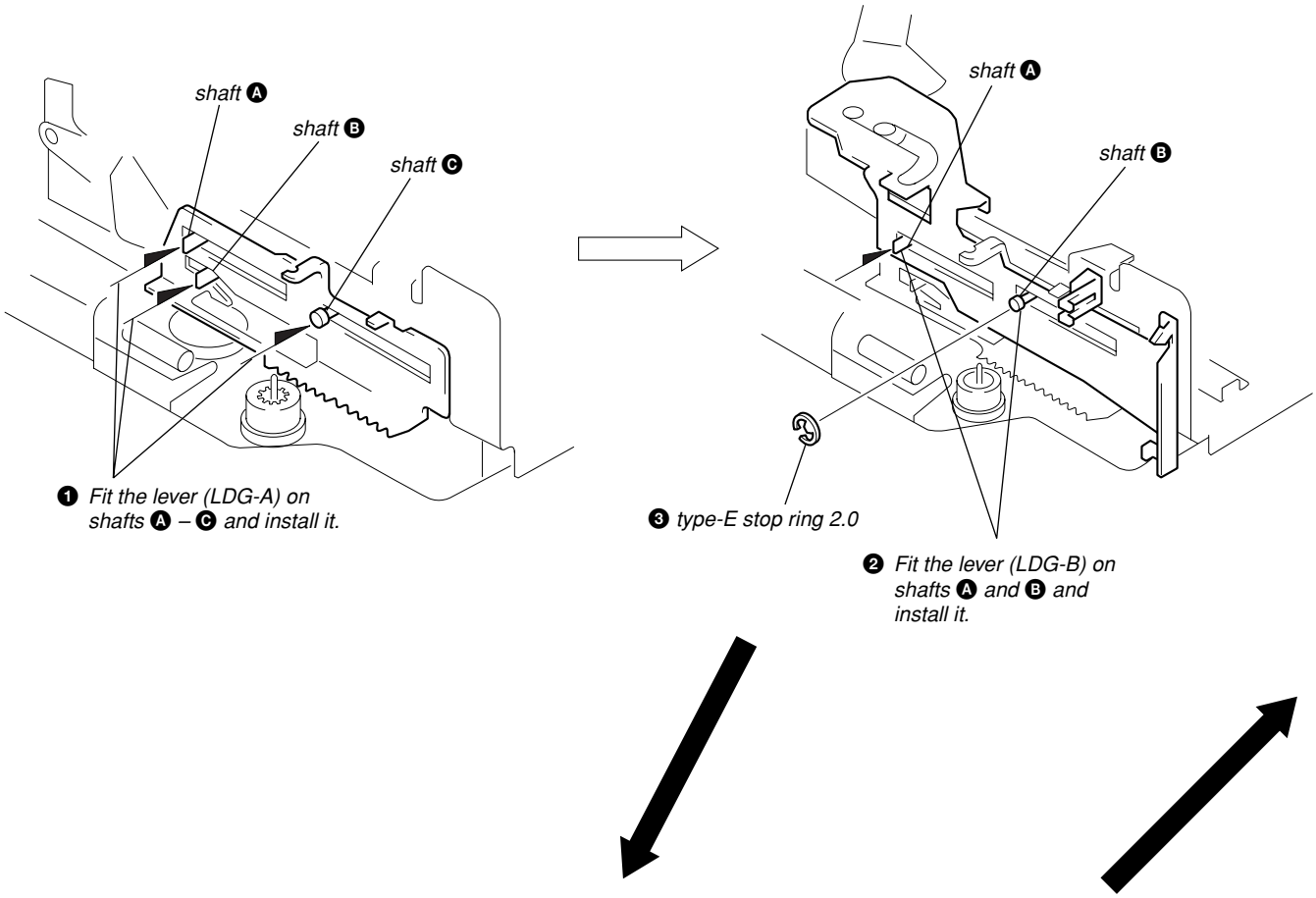
HOUSING


❼ Hold the hanger by bending the claw.
❺ Fit projection on Ⓒ part.
❶ Install the catch to the hanger.
❷ Install the hanger onto two claws of the housing.
hanger
❹ Fit claw on Ⓑ part.
❸ Put the housing under Ⓐ part.
❻ Fit projection on Ⓓ part.
housing
Ⓒ part
❽ Hold the hanger by bending the claw.
Ⓓ part
Ⓐ part
Ⓑ part

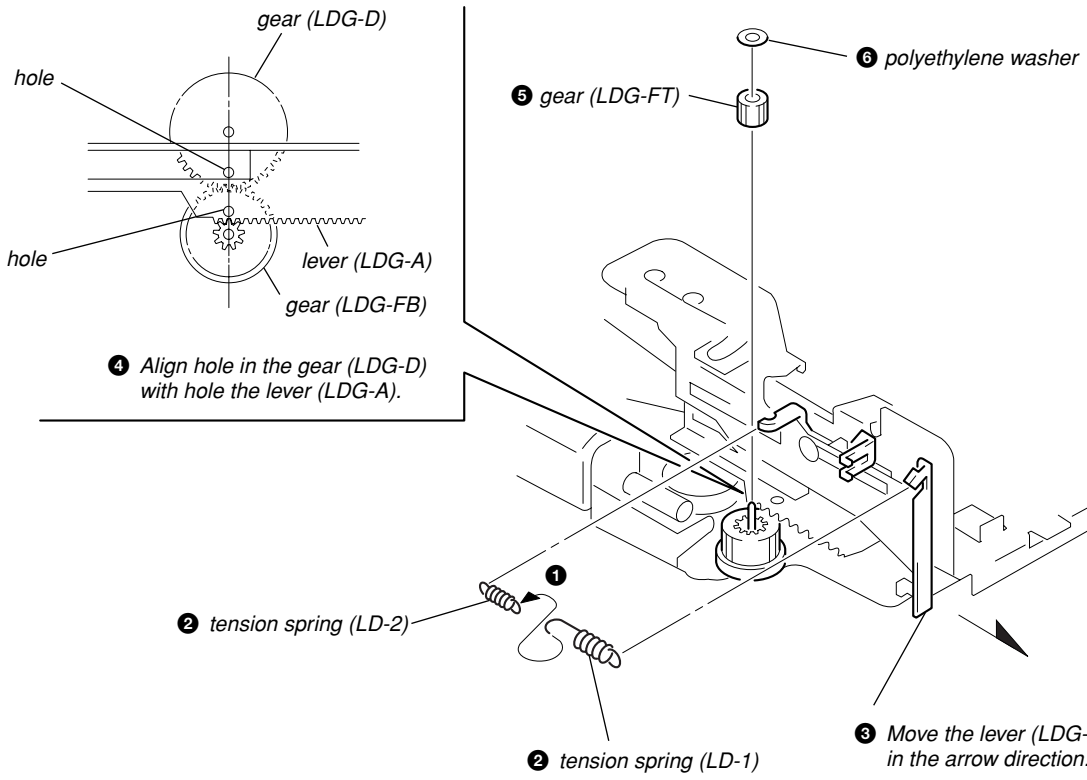
ARM (SUCTION)



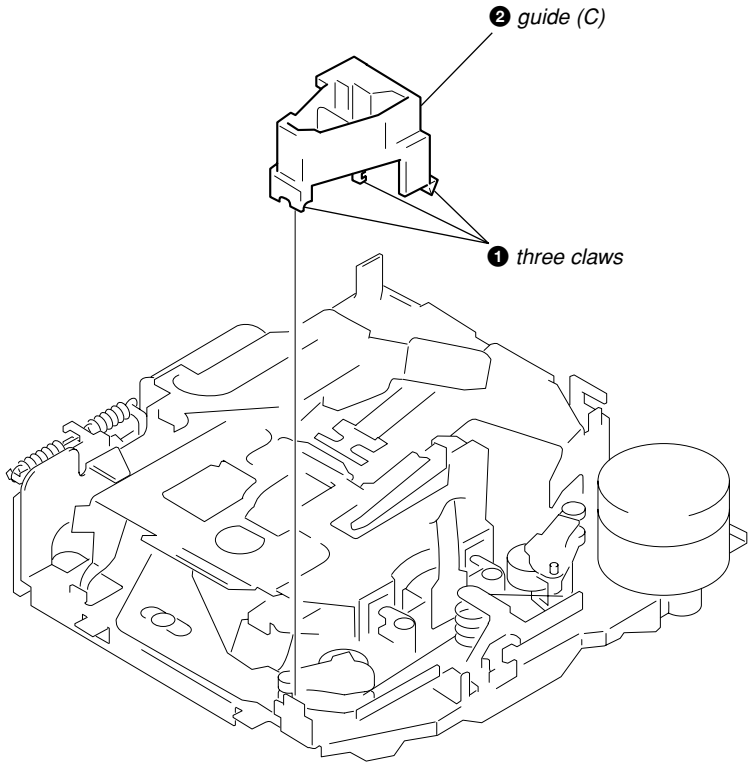
LEVER (LDG-A) / (LDG-B)


shaft Ⓐ
shaft Ⓑ
shaft Ⓒ
❶ Fit the lever (LDG-A) on shafts Ⓐ – Ⓒ and install it.
shaft Ⓐ
shaft Ⓑ
❸ type-E stop ring 2.0
❷ Fit the lever (LDG-B) on shafts Ⓐ and Ⓑ and install it.

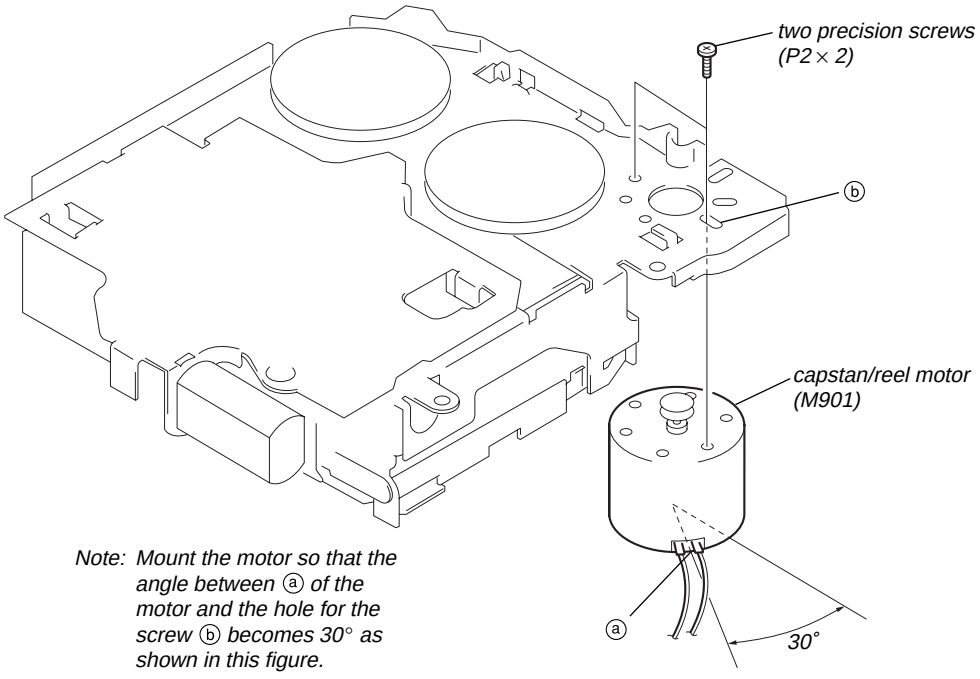
GEAR (LDG-FT)



GUIDE (C)



MOUNTING POSITION OF CAPSTAN/REEL MOTOR (M901)



Note: Mount the motor so that the angle between ⓐ of the motor and the hole for the screw ⓑ becomes 30° as shown in this figure.

SECTION 4
MECHANICAL ADJUSTMENTS

1. Clean the following parts with a denatured-alcohol-moistened swab:
   playback head pinch roller
   rubber belt capstan
   idler
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. The adjustments should be performed with the power supply voltage (14.4 V) unless otherwise noted.

• Torque Measurement

Mode	Torque Meter	Meter Reading
Forward	CQ-102C	2.95 – 6.37 mN•m (30 – 65 g•cm) (0.42 – 0.90 oz•inch)
Forward Back Tension	CQ-102C	0.05 – 0.44 mN•m (0.5 – 4.5g•cm) (0.01 – 0.06 oz•inch)
Reverse	CQ-102RC	2.95 – 6.37 mN•m (30 – 65 g•cm) (0.42 – 0.90 oz•inch)
Reverse Back Tension	CQ-102RC	0.05 – 0.44 mN•m (0.5 – 4.5g•cm) (0.01 – 0.06 oz•inch)
FF, REW	CQ-201B	5.89 – 19.61 mN•m (60 – 200 g•cm) (0.83 – 2.78 oz•inch)

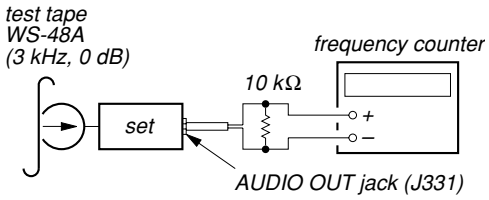
• Tape Tension Measurement

Mode	Tension Meter	Meter Reading
Forward	CQ-403A	more than 60 g (more than 2.12 oz)
Reverse	CQ-403R	more than 60 g (more than 2.12 oz)

SECTION 5
ELECTRICAL ADJUSTMENTS

TAPE DECK SECTION | 0 dB=0.775 V

Tape Speed Adjustment
Setting:



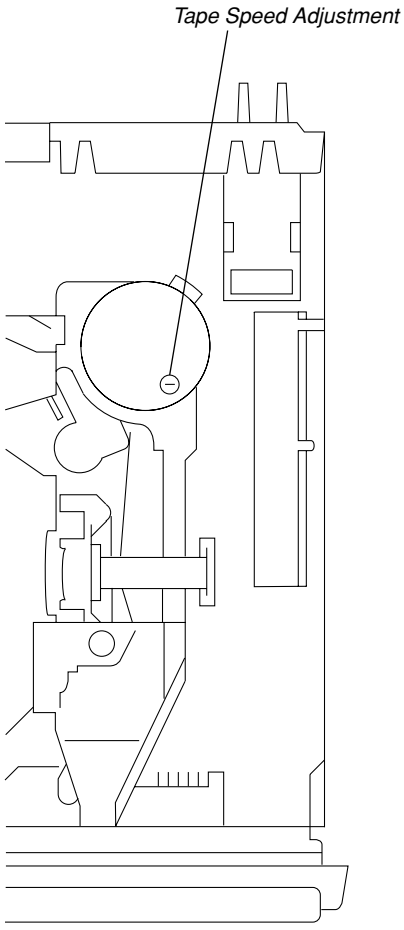
Procedure:
1. Put the set into the FWD PB mode.
2. Adjust adjustment resistor for inside capstan motor so that the reading on the frequency counter becomes 3,000 Hz.

Specification: Constant speed

Frequency counter
2,955 to 3,075 Hz

Adjustment Location:

– SET UPPER VIEW –



TUNER SECTION

Tuner section adjustments are done automatically in this set.

SECTION 6
DIAGRAMS

6-1. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ▬ : Pattern from the side which enables seeing.

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

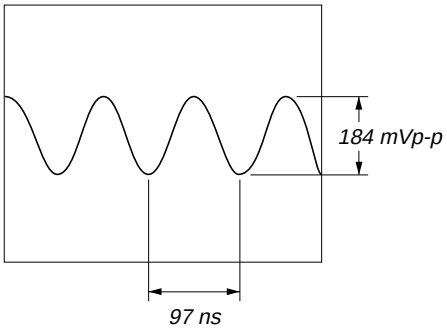
Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ▭ : panel designation.
- ▬ : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM
  ⟨⟨ ⟩⟩ : TAPE PLAYBACK
  ∗ : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : AM
  ⇨ : TAPE PLAYBACK
  ⇨ : BUS AUDIO IN

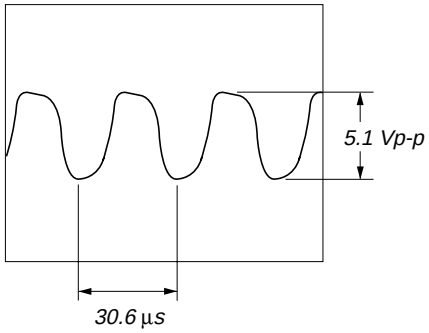
- **Waveforms**

– MAIN Board –

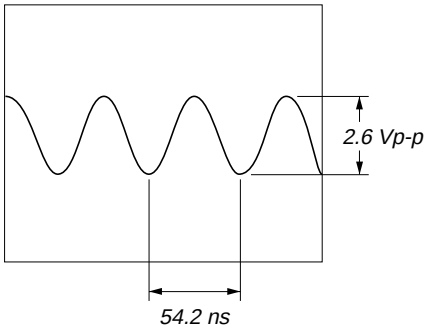
❶ IC1 ① (XTOUT)



❸ IC501 ⑯ (XOUT)

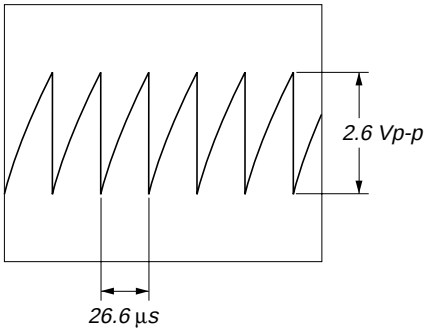


❷ IC501 ⑫ (OSCOUT)



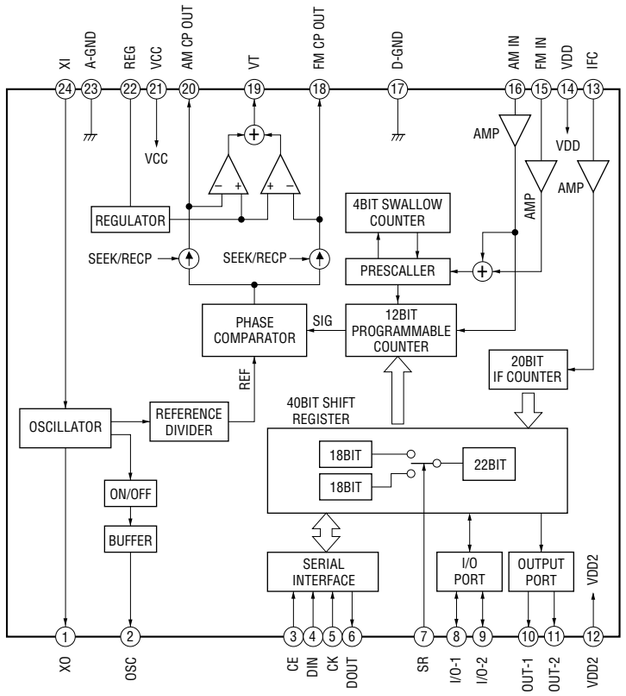
– KEY Board –

❹ IC901 ⑥⓪ (OSC)

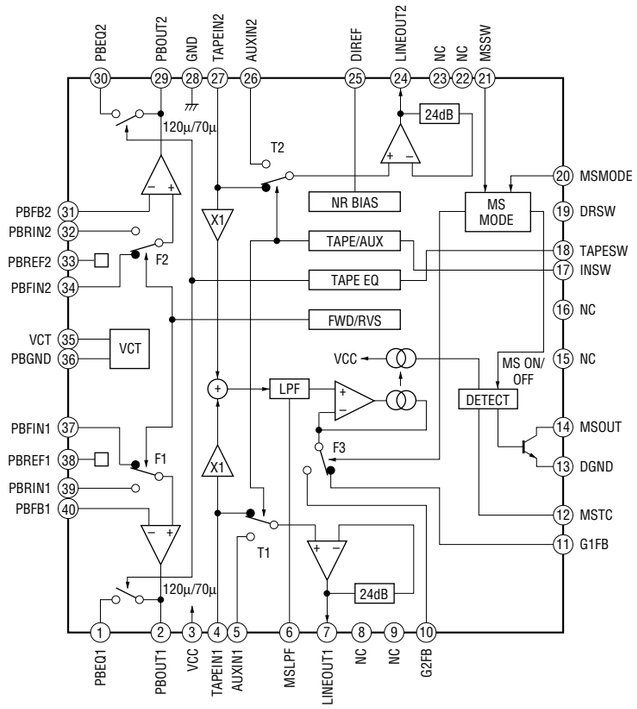


• **IC Block Diagrams**
– MAIN Board –

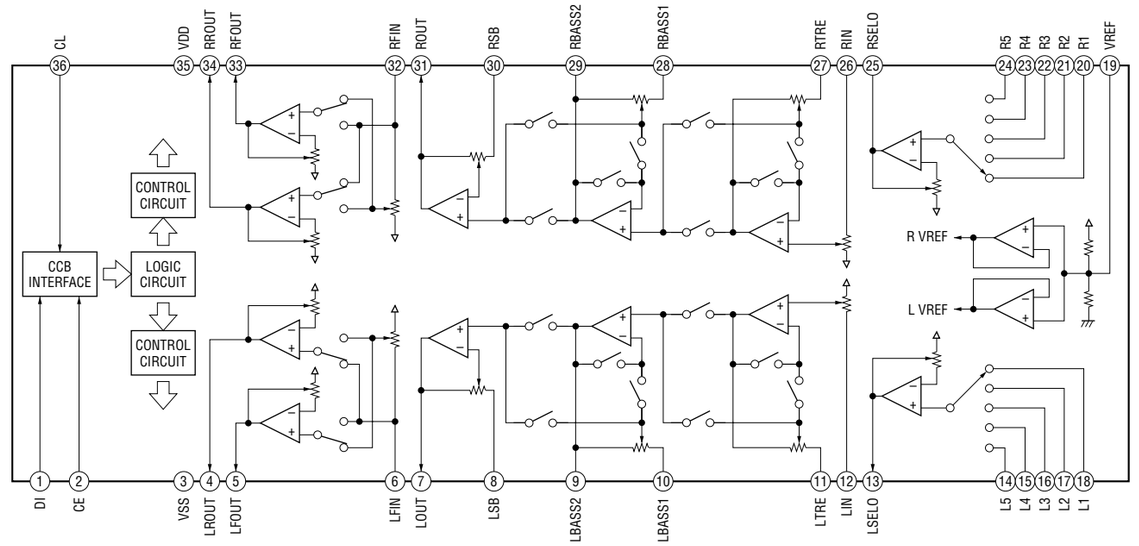
IC1 TB2118F-EL-S



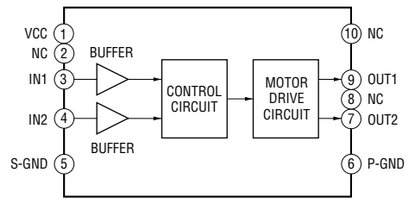
IC301 CXA2509AQ-T4



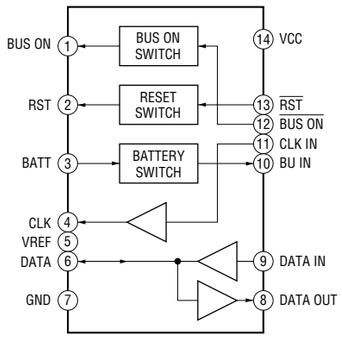
IC330 LC75421M-TLM



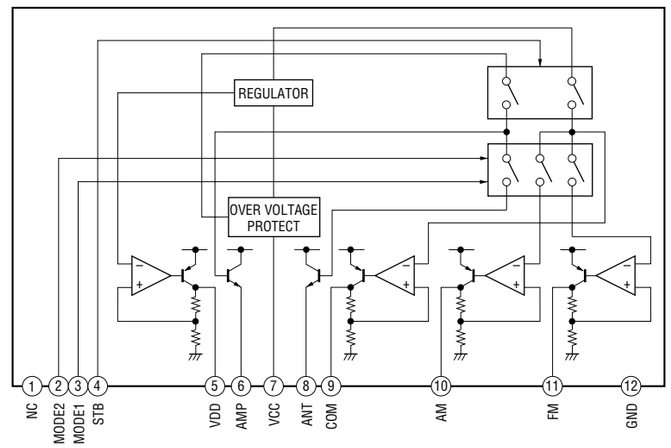
IC351 LB1930M-TLM



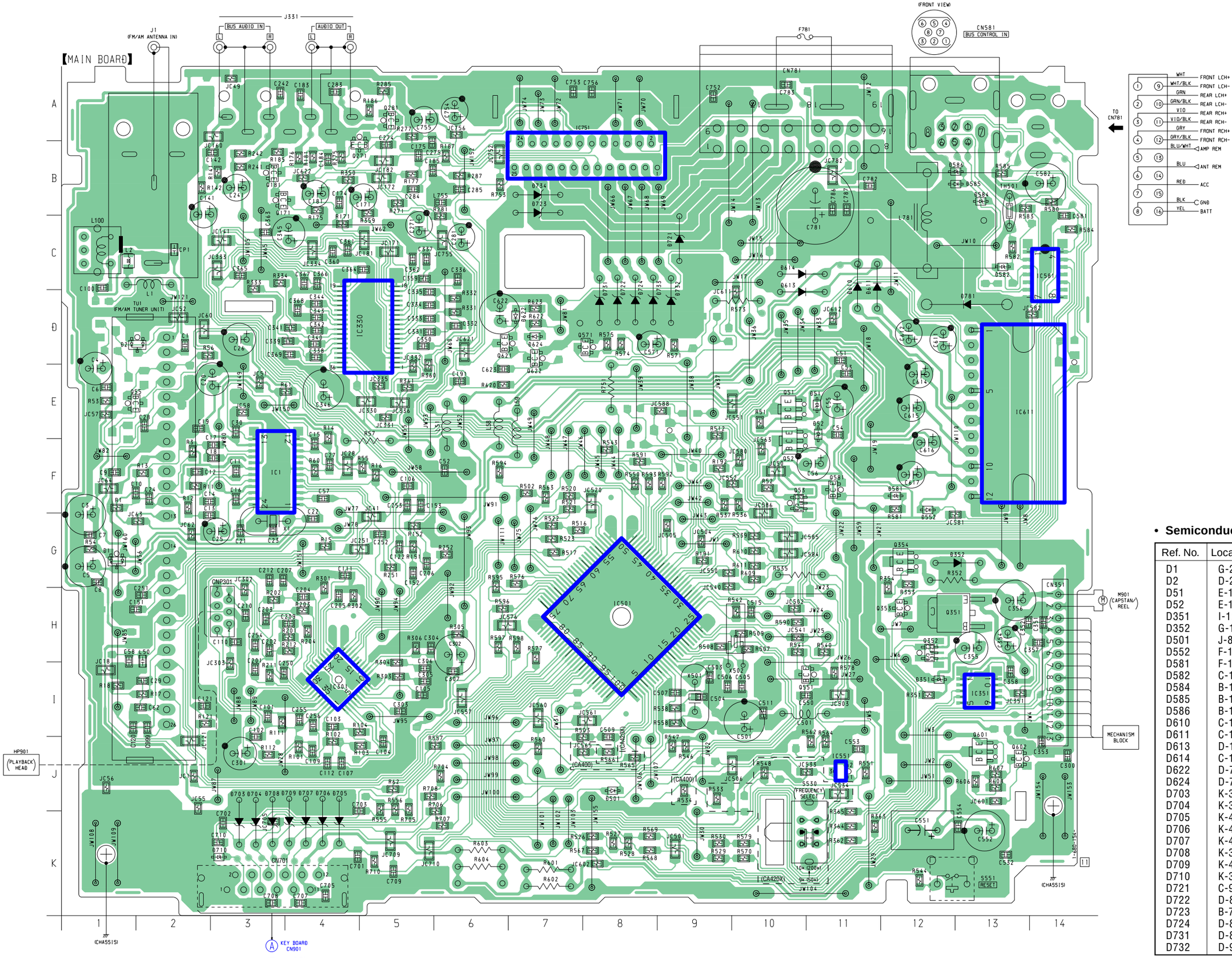
IC581 BA8270F-E2



IC611 BA3918-V2



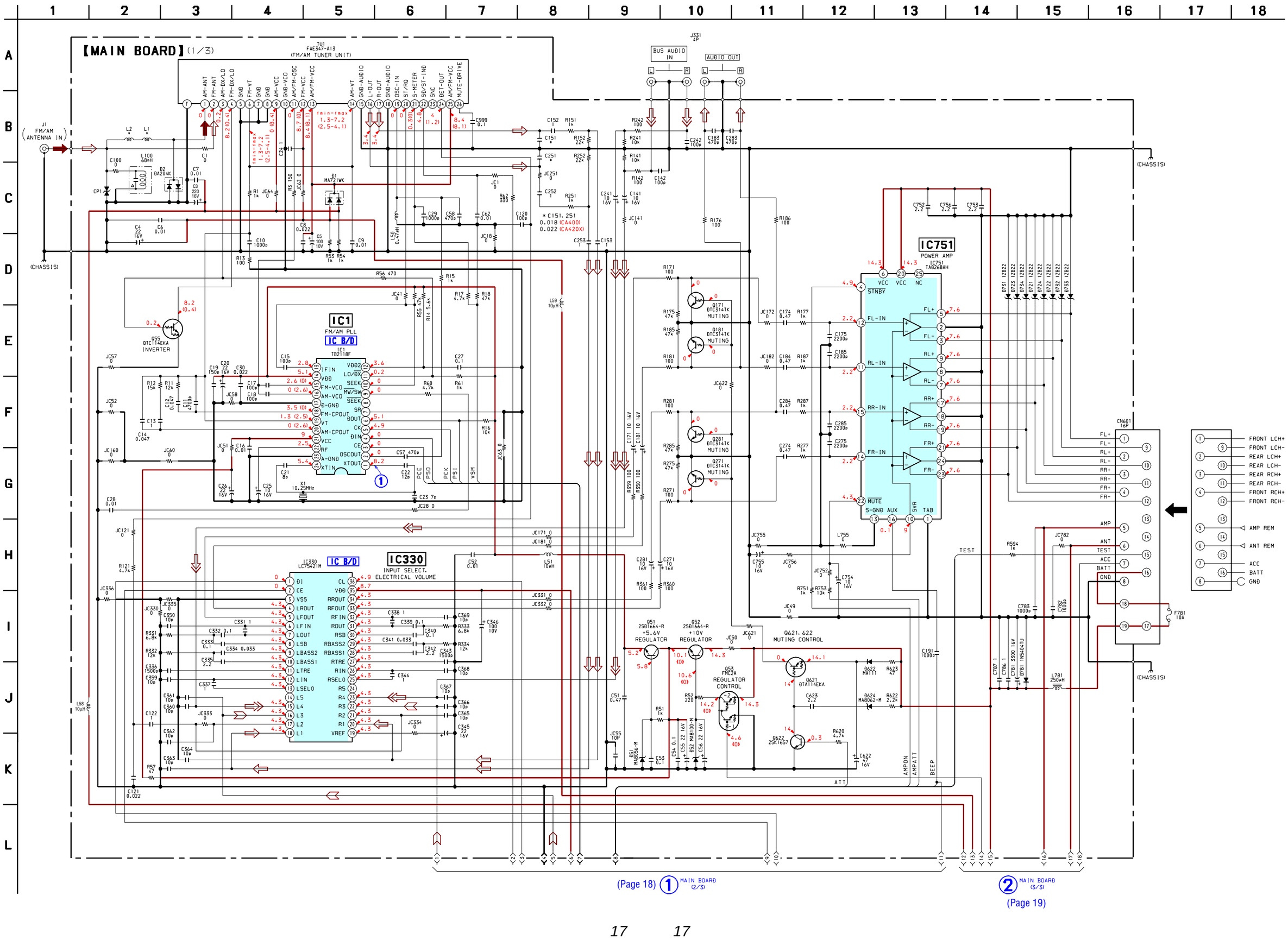
6-2. PRINTED WIRING BOARD – MAIN Board –



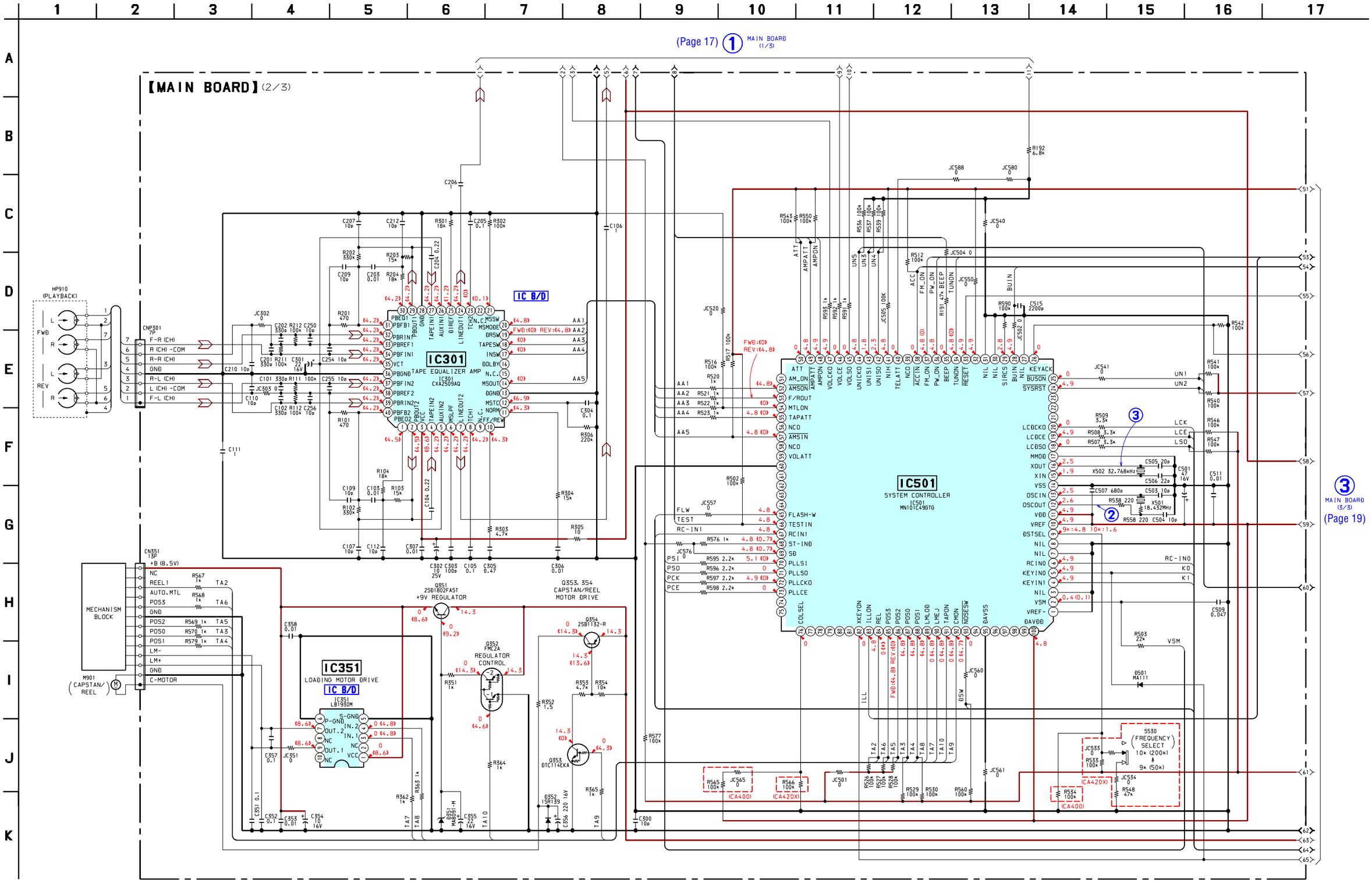
- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D1	G-2	D733	D-8
D2	D-2	D734	B-7
D51	E-11	D781	D-13
D52	E-11		
D351	I-12	IC1	F-3
D352	G-13	IC301	I-4
D501	J-8	IC330	D-5
D552	F-12	IC351	I-13
D581	F-12	IC501	H-8
D582	C-13	IC551	J-11
D584	B-13	IC581	C-14
D585	B-13	IC611	E-13
D586	B-13	IC751	A-8
D610	C-11		
D611	C-11	Q51	E-10
D613	D-10	Q52	F-10
D614	C-10	Q53	F-10
D622	D-7	Q55	E-1
D624	D-7	Q171	B-3
D703	K-3	Q181	B-3
D704	K-3	Q271	B-5
D705	K-4	Q281	A-5
D706	K-4	Q351	H-12
D707	K-4	Q352	H-12
D708	K-3	Q353	H-12
D709	K-4	Q354	G-12
D710	K-3	Q551	I-11
D721	C-9	Q571	D-8
D722	D-8	Q581	F-11
D723	B-7	Q601	J-13
D724	D-8	Q602	J-13
D731	D-8	Q621	D-6
D732	D-9	Q622	D-7

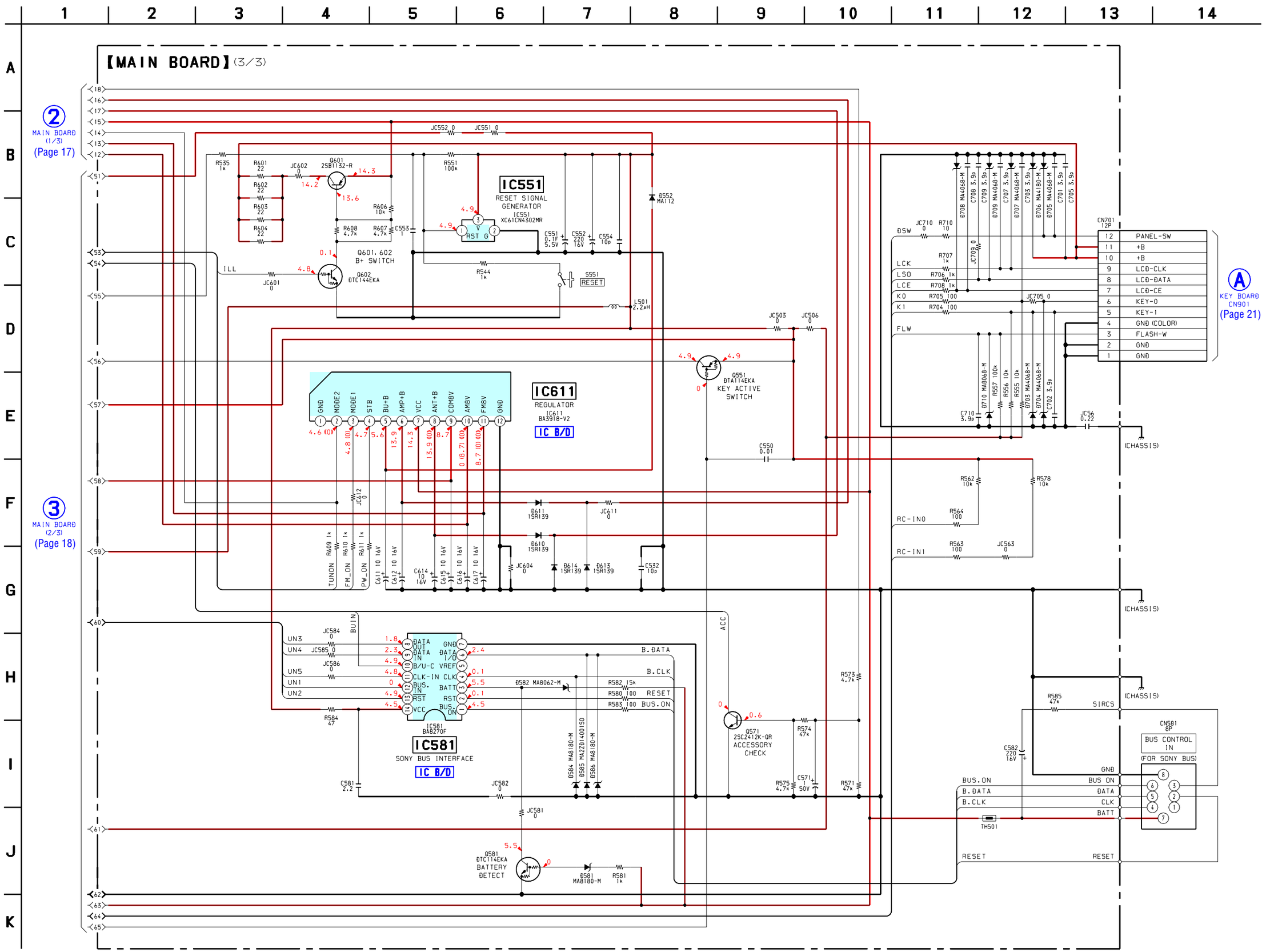
6-3. SCHEMATIC DIAGRAM – MAIN Board (1/3) – • See page 14 for Waveform. • See page 15 for IC Block Diagrams.



6-4. SCHEMATIC DIAGRAM – MAIN Board (2/3) – • See page 14 for Waveforms. • See page 15 for IC Block Diagrams.

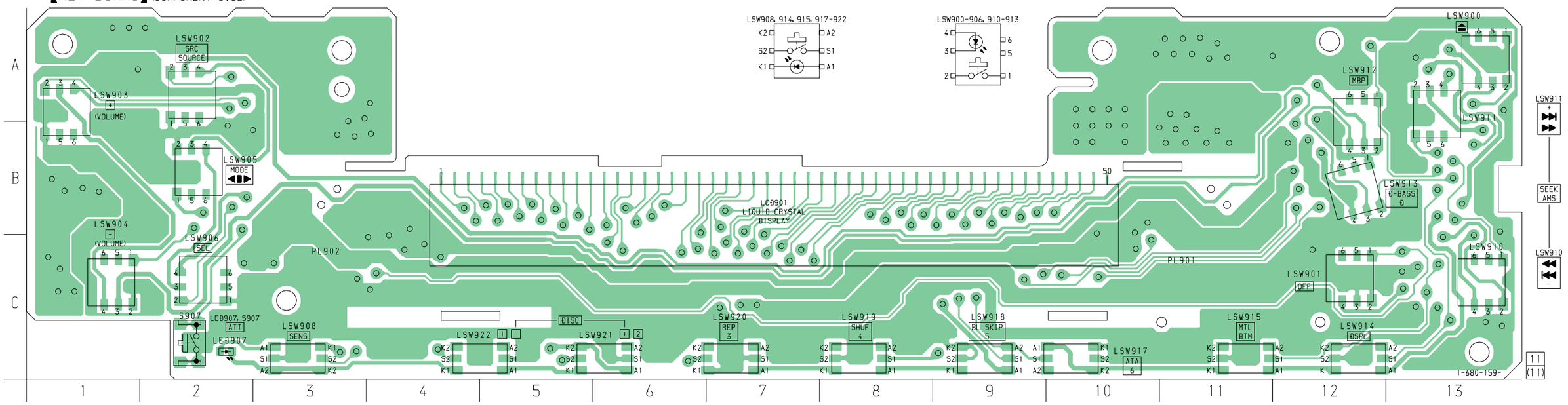


6-5. SCHEMATIC DIAGRAM – MAIN Board (3/3) – • See page 15 for IC Block Diagrams.



6-6. PRINTED WIRING BOARD – KEY Board –

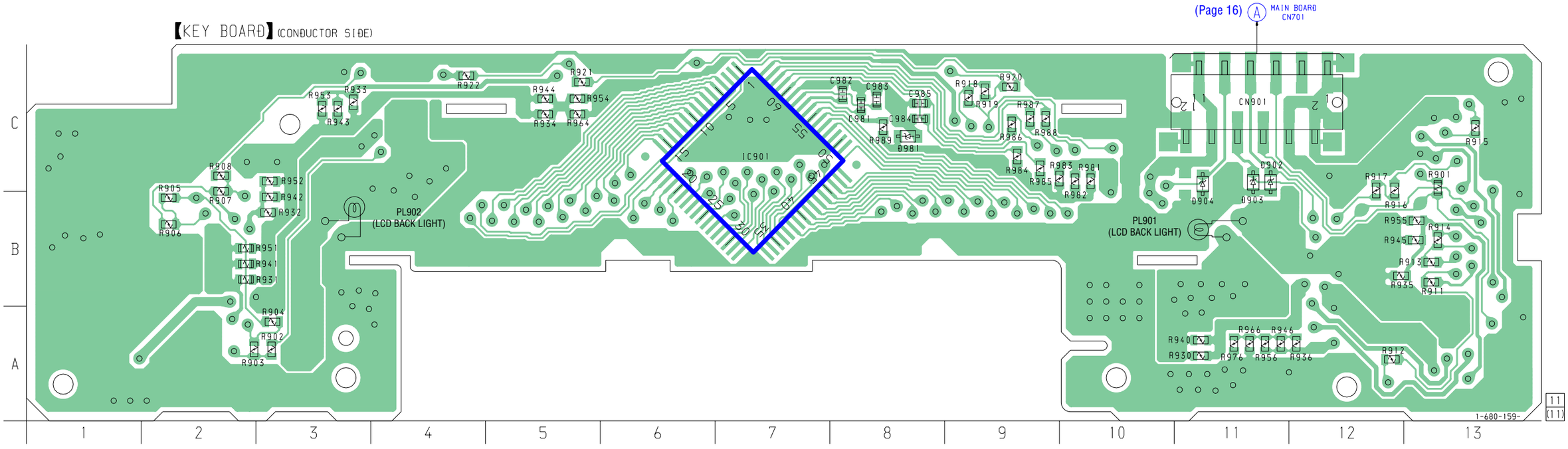
【KEY BOARD】(COMPONENT SIDE)



- **Semiconductor Location**

Ref. No.	Location
LED907	C-2

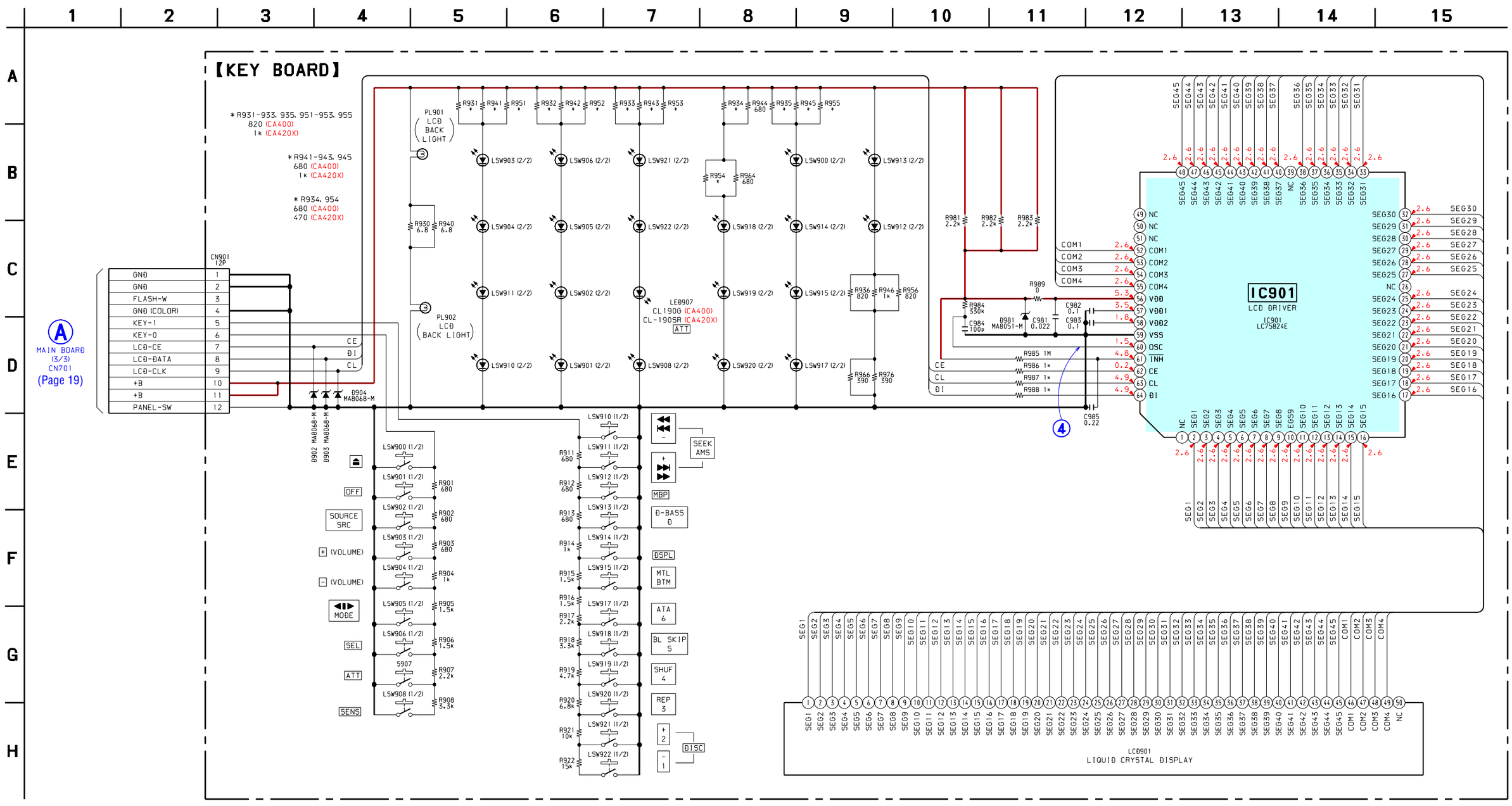
【KEY BOARD】(CONDUCTOR SIDE)



- **Semiconductor Location**

Ref. No.	Location
D902	C-11
D903	C-11
D904	C-11
D981	C-8
IC901	C-7

6-7. SCHEMATIC DIAGRAM – KEY Board – • See page 14 for Waveform.



6-8. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC501 MN101C49GTG (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	VREF–	I	Reference voltage (0V) input terminal (for A/D converter)
2	VSM	I	FM and AM signal meter voltage detection signal input from the FM/AM tuner unit (TU1) (A/D input)
3	NIL	I	Not used (fixed at “L”)
4	KEYIN1	I	Key input terminal (A/D input) LSW910 to LSW922 (SEEK/AMS + ▶▶I ▶▶, SEEK/AMS – I◀◀ ◀◀, MBP, D-BASS D, DSPL, MTL BTM, ATA6, BL SKIP 5, SHUF 4, REP3, 2 DISC+, 1 DISC– keys input)
5	KEYIN0	I	Key input terminal (A/D input) S907, LSW900 to LSW906, LSW908 (ATT, ⏏, OFF, SRC COURCE, + (VOLUME), – (VOLUME), MODE ◀II▶, SEL, SENS keys input)
6	RCIN0	I	Rotary remote commander key input terminal (A/D input)
7	NIL	I	Not used (fixed at “L”)
8	NIL	I	Not used (fixed at “L”)
9	DSTSEL	I	Destination setting terminal (A/D input) “L”: XR-CA400, “H”: XR-CA420X
10	VREF+	I	Reference voltage (+5V) input terminal (for A/D converter)
11	VDD	—	Power supply terminal (+5V)
12	OSCOUT	O	Main system clock output terminal (18.432 MHz)
13	OSCIN	I	Main system clock input terminal (18.432 MHz)
14	VSS	—	Ground terminal
15	XI	I	Sub system clock input terminal (32.768 kHz)
16	XO	O	Sub system clock output terminal (32.768 kHz)
17	MMOD	I	Selection signal of memory mode input terminal “L”:single chip mode (fixed at “L”)
18	LCDSO	O	Serial data output to the liquid crystal display driver (IC901)
19	LCDCE	O	Chip enable signal output to the liquid crystal display driver (IC901) “H” active
20	LCDCKO	O	Serial data transfer clock signal output to the liquid crystal display driver (IC901)
21 to 23	—	O	Not used (open)
24	$\overline{\text{SYSRST}}$	O	Reset signal output to the SONY bus interface (IC581) “L”: reset
25	$\overline{\text{BUSON}}$	O	Bus on/off control signal output to the SONY bus interface (IC581) “L”: bus on
26	KEYACK	I	Input of acknowledge signal for the key entry Acknowledge signal is input to accept function and eject keys in the power off status On at input of “H”
27	NIL	I	Not used (fixed at “L”)
28	BU-IN	I	Battery detection signal input from the SONY bus interface (IC581) “L” is input at low voltage
29	SIRCS	I	SIRCS remote control signal input terminal Not used (open)
30, 31	NIL	I	Not used (fixed at “L”)
32	—	I	Not used (fixed at “H”)
33	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator (IC551) and reset switch (S551) “L”: reset “L” is input for several 100 msec after power on, then it changes to “H”
34	TUNON	O	Tuner system power supply on/off control signal output “H”: tuner power on
35	BEEP	O	Beep sound drive signal output to the power amplifier (IC751)
36	PW_ON	O	Main system power supply on/off control signal output “H”: power on
37	FM_ON	O	FM power supply on/off control signal output “H”: FM power on
38	$\overline{\text{ACCIN}}$	I	Accessory detection signal input “L”: accessory on
39	NCO	O	Not used (open)
40	TELATT	I	Telephone attenuate signal input At input of “H”, the signal is attenuated by –20 dB
41	NIH	I	Not used (fixed at “H”)
42	BUSSO	O	Serial data output to the SONY bus interface (IC581)
43	BUSSI	I	Serial data input from the SONY bus interface (IC581)
44	BUSCKO	O	Serial data transfer clock signal output to the SONY bus interface (IC581)
45	VOLSO	O	Serial data output to the electrical volume (IC330)
46	VOLCE	O	Chip enable signal output to the electrical volume (IC330) “H” active
47	VOLCKO	O	Bus clock signal output to the electrical volume (IC330)
48	AMPON	O	Standby on/off control signal output to the power amplifier (IC751) “L”: standby mode, “H”: amplifier on
49	$\overline{\text{AMPATT}}$	O	Muting on/off control signal output to the power amplifier (IC751) “L”: muting on
50	ATT	O	Audio line muting on/off control signal output “H”: muting on
51	NCO	O	Not used (open)
52	$\overline{\text{AMSON}}$	O	Tape auto music sensor control signal output to the CXA2509AQ (IC301) “L”: auto music sensor on
53	F/ROUT	O	Forward/reverse control signal output to the CXA2509AQ (IC301) “L”: reverse direction, “H”: forward direction
54	MTLON	O	METAL on/off control signal output to the CXA2509AQ (IC301) “H”: METAL on
55	TAPATT	O	Tape muting on/off control signal output to the CXA2509AQ (IC301) “H”: muting on Active at ATA, FF/REW mode
56	NCO	O	Not used (open)
57	AMSIN	I	Whether a music is present or not from CXA2509AQ (IC301) is detected at auto music sensor “L”: music is present, “H”: music is not present
58	NCO	O	Not used (open)
59	VOLATT	O	Pre amplifier muting on/off control signal output terminal Not used (open)
60 to 64	—	O	Not used (open)
65	FLASH_W	I	Internal flash memory data write mode detection signal input terminal “L”: data write mode Not used (open)
66	$\overline{\text{TESTIN}}$	I	Setting terminal for the test mode “L”: test mode, normally fixed at “H”
67	RCIN1	I	Rotary remote commander shift key input terminal “L”: shift key on
68	ST-IND	I/O	FM stereo broadcasting detection signal input from the FM/AM tuner unit (TU1), or forced monaural control signal output to the FM/AM tuner unit (TU1) “L” is input in the FM stereo mode, or “L” is output in the forced monaural mode
69	SD	I	Station detector detection signal input from the FM/AM tuner unit (TU1) Stop level for SEEK, BTM, etc. is determined SD is present at input of “H”
70	PLLSI	I	PLL serial data input from the FM/AM PLL (IC1)
71	PLLSO	O	PLL serial data output to the FM/AM PLL (IC1)
72	PLLCKO	O	PLL serial data transfer clock signal output to the FM/AM PLL (IC1)
73	PLLCE	O	PLL chip enable signal output to the FM/AM PLL (IC1) “H” active
74, 75	—	O	Not used (open)
76	COLSEL	I	Setting terminal for the illumination color “L”: amber (XR-CA420X), “H”: green (XR-CA400)
77 to 81	—	O	Not used (open)
82	XKEYON	O	A/D converter power control signal output terminal When the KEYACK (pin ㉖) that controls reference voltage power for key A/D conversion input is active, “L” is output from this terminal to enable the input
83	ILLON	O	Power on/off control signal output of the illumination LED and liquid crystal display driver (IC901) “H”: power on
84	REL	I	Rotation detection signal input from supply reel sensor and take-up reel sensor on the mechanism deck
85	POS3	I	Tape position (EJECT/FF/REW/REV/ FWD mode) detect input from the tape operation switch on the deck mechanism POS3: “L”: REV and EJECT mode, “H”: others mode POS2: “L”: REW mode, “H”: others mode POS0: “L”: EJECT mode, “H”: others mode POS1: “L”: FF and FWD mode, “H”: others mode
86	POS2	I	
87	POS0	I	
88	POS1	I	

22

Pin No.	Pin Name	I/O	Description
89	LMLOD	O	Motor drive signal output to the loading motor drive (IC351) "H" active (For the loading direction and forward side operation) *1
90	LMEJ	O	Motor drive signal output to the loading motor drive (IC351) "H" active (For the eject direction and reverse side operation) *1
91	TAPEON	O	Power on/off control signal output of the loading motor drive (IC351) and capstan/reel motor (M901) "H": motor on
92	CMON	O	Capstan/reel motor (M901) drive signal output terminal "H": motor on
93	$\overline{\text{NOSESW}}$	I	Front panel block remove/attach detection signal input "L": front panel is attached, "H": front panel is removed
94	—	O	Not used (open)
95	DAVSS	—	Ground terminal (for D/A converter)
96 to 99	—	O	Not used (open)
100	DAVCC	—	Power supply terminal (+5V) (for D/A converter)

*1 Loading motor control

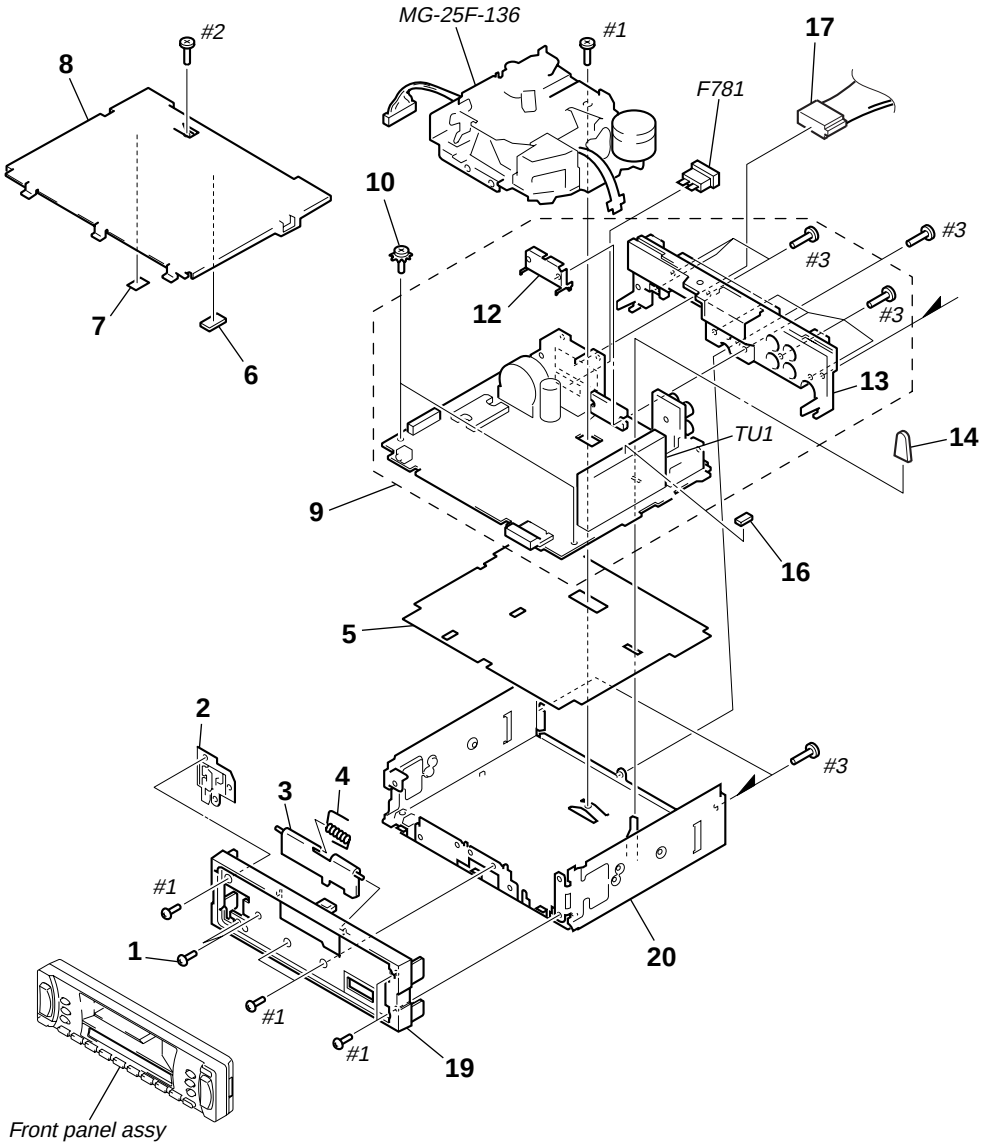
Mode / Terminal	STOP	LOADING/ FORWARD	EJECT/ REVERSE	BRAKE
LMLOD (pin ⑧⑨)	"L"	"H"	"L"	"H"
LMEJ (pin ⑨⓪)	"L"	"L"	"H"	"H"

SECTION 7
EXPLODED VIEWS

NOTE:

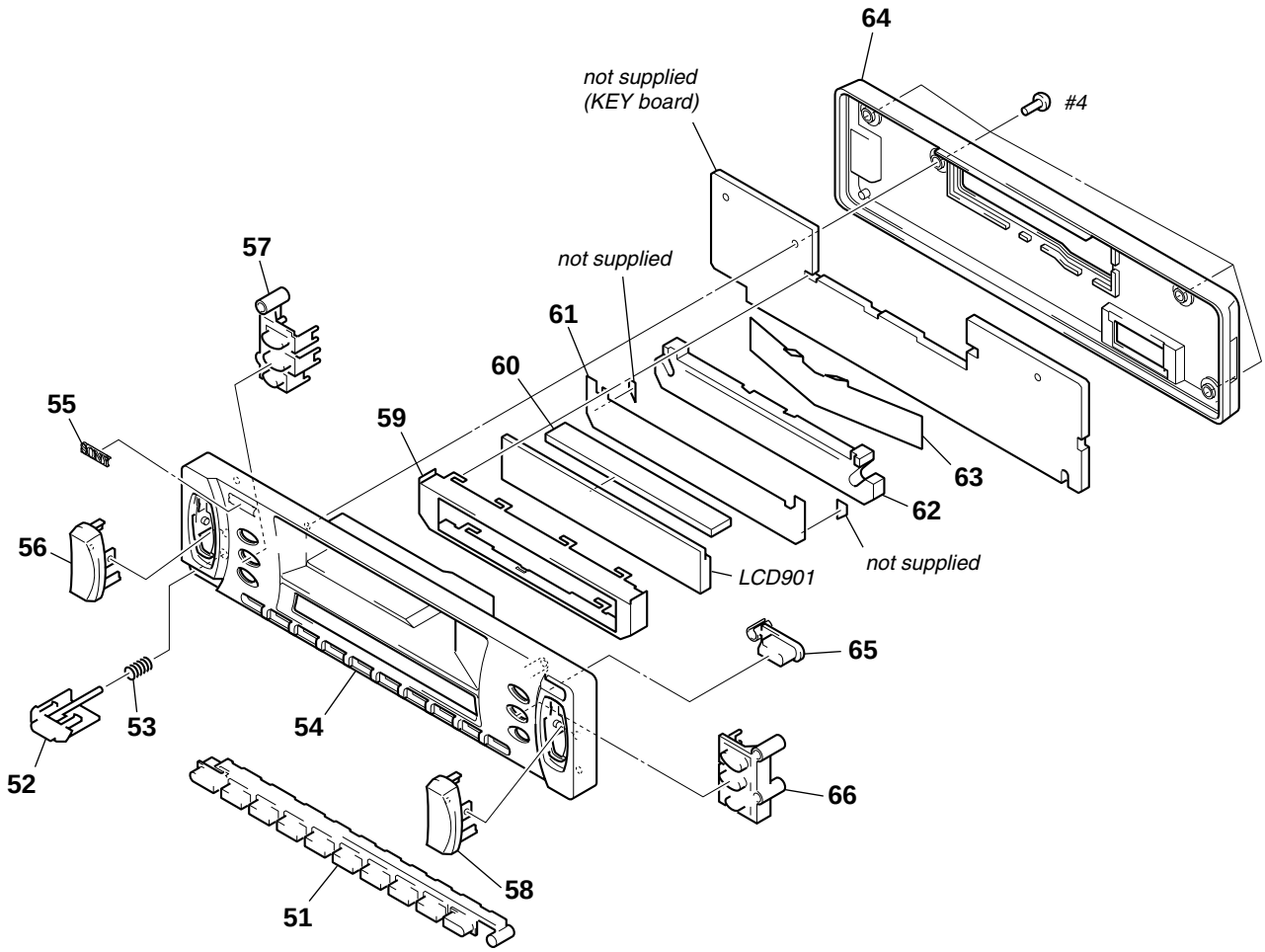
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

(1) CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
1	3-042-244-11	SCREW (T)	
2	X-3370-437-1	LOCK ASSY	
3	3-027-437-51	DOOR, CASSETTE	
4	3-935-003-01	SPRING, TORSION	
* 5	3-033-846-01	INSULATED PLATE	
* 6	3-046-991-01	SPACER (COVER R)	
* 7	3-046-990-01	SPACER (COVER L)	
* 8	3-040-995-01	COVER	
* 9	A-3326-775-A	MAIN BOARD, COMPLETE (CA400)	
* 9	A-3326-778-A	MAIN BOARD, COMPLETE (CA420X)	
10	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT	
* 12	3-040-998-01	BRACKET (IC)	
* 13	3-224-897-11	HEAT SINK (ISO)	
14	3-012-859-01	CAP (25), RUBBER	
* 16	3-935-014-01	CUSHION (U)	
17	1-776-206-21	CORD (WITH CONNECTOR) (POWER)	
19	3-224-862-01	PANEL, SUB	
20	3-009-813-52	CHASSIS	
F781	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	
TU1	1-693-511-11	FM/AM TUNER UNIT (FAE347-A13)	

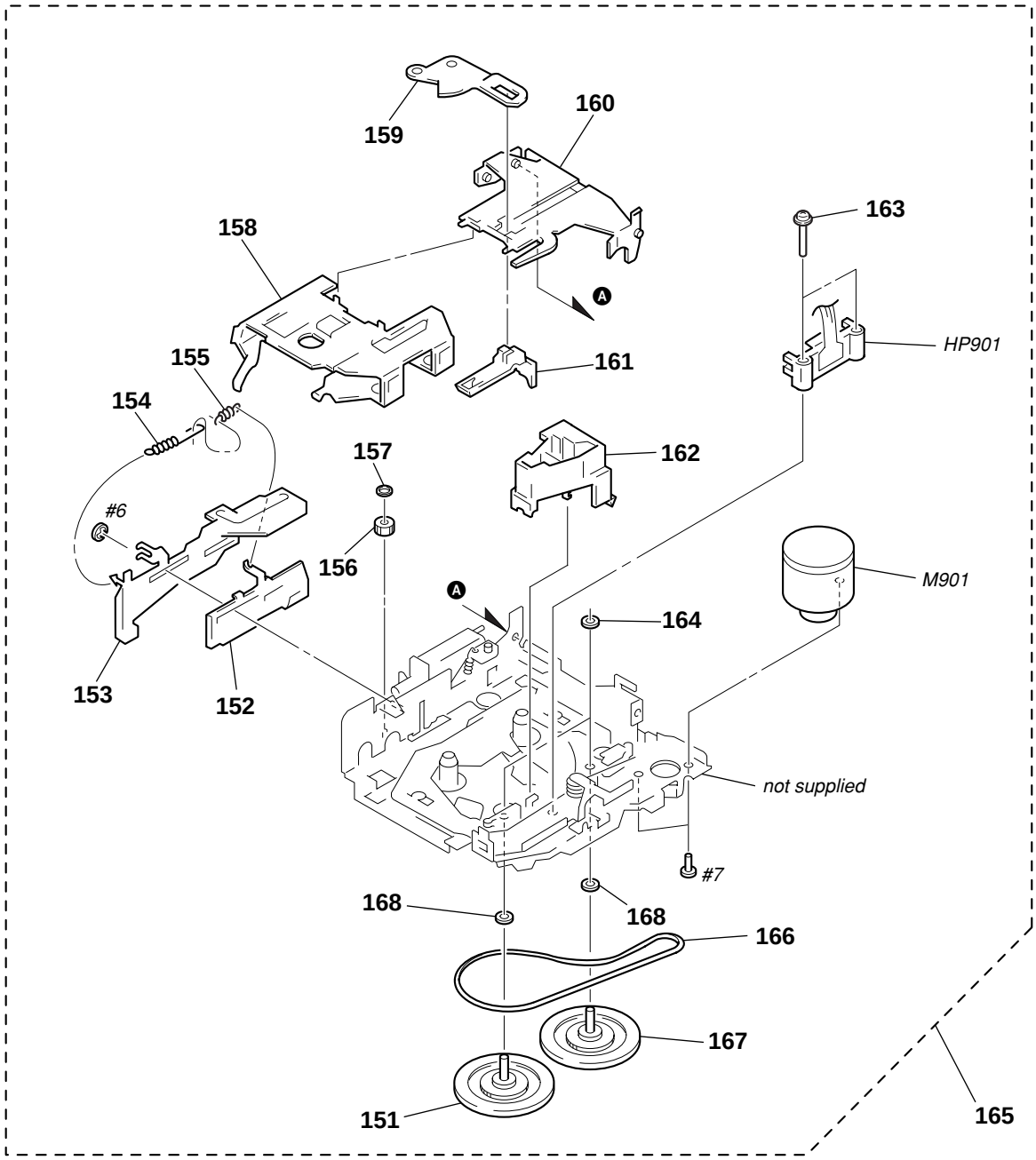
(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	3-224-867-01	BUTTON (PRESET/U) (ATT. SENS. 1. 2. 3. 4. 5. 6. BTM. DSPL)	
52	3-224-869-01	BUTTON (RELEASE/U) (RELEASE)	
53	3-231-816-01	SPRING (RELEASE)	
54	3-224-860-01	PANEL, FRONT (CA400)	
54	3-224-860-11	PANEL, FRONT (CA420X)	
55	3-042-504-01	EMBLEM (NO.2.5), SONY	
56	3-224-863-01	BUTTON (+/-) (CA400)	
56	3-224-863-11	BUTTON (+/-) (CA420X)	
57	3-224-866-01	BUTTON (R/U) (SRC. MODE. SEL)	
58	3-224-864-01	BUTTON (S/A) (+ ▶▶I ▶▶. SEEK AMS. ◀◀ I◀◀ -)	

Ref. No.	Part No.	Description	Remark
* 59	3-224-896-01	PLATE (LCD), GROUND	
60	1-694-781-11	CONDUCTIVE BOARD, CONNECTION	
* 61	3-224-871-11	ILLUMINATOR (LCD)	
* 62	3-224-870-01	PLATE (LCD), LIGHT GUIDE	
* 63	3-224-895-01	REFLECTOR (LCD)	
64	3-224-861-01	PANEL, FRONT BACK	
65	3-224-868-01	BUTTON (EJECT/U) (⏏)	
66	3-224-865-01	BUTTON (L/U) (MBP. D. OFF)	
LCD901	1-804-298-11	DISPLAY PANEL, LIQUID CRYSTAL	

(3) MECHANISM DECK SECTION (MG-25F-136)



Ref. No.	Part No.	Description	Remark
151	A-3291-667-A	CLUTCH (FR) ASSY	
* 152	3-019-130-01	LEVER (LDG-A)	
* 153	3-019-131-01	LEVER (LDG-B)	
154	3-020-539-01	SPRING (LD-1), TENSION	
155	3-020-540-01	SPRING (LD-2), TENSION	
156	3-020-542-01	GEAR (LOADING FT)	
157	3-341-753-11	WASHER, POLYETHYLENE	
158	3-020-533-01	HOUSING	
* 159	3-020-532-01	ARM (SUCTION)	
160	3-020-534-01	HANGER	

Ref. No.	Part No.	Description	Remark
161	3-933-346-01	CATCHER	
162	3-933-344-01	GUIDE (C)	
163	3-014-798-01	SCREW (HEAD), SPECIAL	
164	3-364-151-01	WASHER	
165	A-3220-610-A	MECHANISM DECK ASSY	
166	3-017-302-01	BELT (25)	
167	3-026-636-01	FLYWHEEL (F)	
168	3-701-437-21	WASHER	
HP901	1-500-157-21	HEAD, MAGNETIC (PLAYBACK)	
M901	A-3291-665-A	MOTOR ASSY, MAIN (CAPSTAN/REEL)	

SECTION 8
ELECTRICAL PARTS LIST

KEY

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark
		KEY BOARD	
		**********	
	1-694-781-11	CONDUCTIVE BOARD, CONNECTION	
*	3-224-870-01	PLATE (LCD), LIGHT GUIDE	
*	3-224-871-11	ILLUMINATOR (LCD)	
*	3-224-895-01	REFLECTOR (LCD)	
*	3-224-896-01	PLATE (LCD), GROUND	
		< CAPACITOR >	
C981	1-164-227-11	CERAMIC CHIP 0.022uF 10% 25V	
C982	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C983	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C984	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C985	1-127-715-11	CERAMIC CHIP 0.22uF 10% 16V	
		< CONNECTOR >	
CN901	1-794-312-11	PIN, CONNECTOR 12P	
		< DIODE >	
D902	8-719-977-12	DIODE DTZ6.8B	
D903	8-719-977-12	DIODE DTZ6.8B	
D904	8-719-977-12	DIODE DTZ6.8B	
D981	8-719-420-90	DIODE MA8051-M	
		< IC >	
IC901	8-759-366-34	IC LC75824E	
		< LIQUID CRYSTAL DISPLAY >	
LCD901	1-804-298-11	DISPLAY PANEL, LIQUID CRYSTAL	
		< LED >	
LED907	8-719-037-96	LED CL-190G-CD-T (ATT) (CA400)	
LED907	8-719-061-16	LED CL-190SR-CD-T (ATT) (CA420X)	
		< SWITCH >	
LSW900	1-762-618-21	SWITCH, KEY BOARD (WITH LED) (⏏)	(CA400)
LSW900	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (⏏)	(CA420X)
LSW901	1-762-619-21	SWITCH, KEY BOARD (WITH LED) (OFF)	(CA400)
LSW901	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (OFF)	(CA420X)
LSW902	1-762-619-21	SWITCH, KEY BOARD (WITH LED) (SRC, SOURCE)	(CA400)
LSW902	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (SRC, SOURCE)	(CA420X)
LSW903	1-762-618-21	SWITCH, KEY BOARD (WITH LED) (+ (VOLUME))	(CA400)
LSW903	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (+ (VOLUME))	(CA420X)
LSW904	1-762-618-21	SWITCH, KEY BOARD (WITH LED) (– (VOLUME))	(CA400)
LSW904	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (– (VOLUME))	(CA420X)
LSW905	1-762-619-21	SWITCH, KEY BOARD (WITH LED) (MODE ◀I▶)	(CA400)
LSW905	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (MODE ◀I▶)	(CA420X)
LSW906	1-762-619-21	SWITCH, KEY BOARD (WITH LED) (SEL)	(CA400)
LSW906	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (SEL)	(CA420X)
LSW908	1-771-883-11	SWITCH, TACTILE (WITH LED) (SENS)	(CA420X)
LSW908	1-786-106-21	SWITCH, TACTILE (WITH LED) (SENS)	(CA400)
LSW910	1-762-618-21	SWITCH, KEY BOARD (WITH LED) (SEEK AMS ◀◀ I◀◀ –)	(CA400)
LSW910	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (SEEK AMS ◀◀ I◀◀ –)	(CA420X)
LSW911	1-762-618-21	SWITCH, KEY BOARD (WITH LED) (SEEK AMS + ▶▶I ▶▶)	(CA400)
LSW911	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (SEEK AMS + ▶▶I ▶▶)	(CA420X)
LSW912	1-771-500-21	SWITCH, KEYBOARD (WITH LED) (MBP)	
LSW913	1-771-500-21	SWITCH, KEYBOARD (WITH LED) (D-BASS, D)	
LSW914	1-771-883-11	SWITCH, TACTILE (WITH LED) (DSPL)	(CA420X)
LSW914	1-786-106-21	SWITCH, TACTILE (WITH LED) (DSPL)	(CA400)
LSW915	1-771-883-11	SWITCH, TACTILE (WITH LED) (MTL, BTM)	(CA420X)
LSW915	1-786-106-21	SWITCH, TACTILE (WITH LED) (MTL, BTM)	(CA400)
LSW917	1-771-883-11	SWITCH, TACTILE (WITH LED) (ATA, 6)	(CA420X)
LSW917	1-786-106-21	SWITCH, TACTILE (WITH LED) (ATA, 6)	(CA400)
LSW918	1-771-883-11	SWITCH, TACTILE (WITH LED) (BL SKIP, 5)	(CA420X)

KEY

Ref. No.	Part No.	Description			Remark
LSW918	1-786-106-21	SWITCH, TACTILE (WITH LED) (BL SKIP, 5)			(CA400)
LSW919	1-771-883-11	SWITCH, TACTILE (WITH LED) (SHUF, 4)			(CA420X)
LSW919	1-786-106-21	SWITCH, TACTILE (WITH LED) (SHUF, 4)			(CA400)
LSW920	1-771-883-11	SWITCH, TACTILE (WITH LED) (REP, 3)			(CA420X)
LSW920	1-786-106-21	SWITCH, TACTILE (WITH LED) (REP, 3)			(CA400)
LSW921	1-771-883-11	SWITCH, TACTILE (WITH LED) (2, DISC +)			(CA420X)
LSW921	1-786-106-21	SWITCH, TACTILE (WITH LED) (2, DISC +)			(CA400)
LSW922	1-771-883-11	SWITCH, TACTILE (WITH LED) (1, DISC –)			(CA420X)
LSW922	1-786-106-21	SWITCH, TACTILE (WITH LED) (1, DISC –)			(CA400)
		< PILOT LAMP >			
PL901	1-518-743-11	LAMP, PILOT (LCD BACK LIGHT) (CA420X)			
PL901	1-518-743-31	LAMP, PILOT (LCD BACK LIGHT) (CA400)			
PL902	1-518-743-11	LAMP, PILOT (LCD BACK LIGHT) (CA420X)			
PL902	1-518-743-31	LAMP, PILOT (LCD BACK LIGHT) (CA400)			
		< RESISTOR >			
R901	1-216-819-11	METAL CHIP	680	5%	1/16W
R902	1-216-819-11	METAL CHIP	680	5%	1/16W
R903	1-216-819-11	METAL CHIP	680	5%	1/16W
R904	1-216-821-11	METAL CHIP	1K	5%	1/16W
R905	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R906	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R907	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R908	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R911	1-216-819-11	METAL CHIP	680	5%	1/16W
R912	1-216-819-11	METAL CHIP	680	5%	1/16W
R913	1-216-819-11	METAL CHIP	680	5%	1/16W
R914	1-216-821-11	METAL CHIP	1K	5%	1/16W
R915	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R916	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R917	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R918	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R919	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R920	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R921	1-216-833-11	METAL CHIP	10K	5%	1/16W
R922	1-216-835-11	METAL CHIP	15K	5%	1/16W
R930	1-216-795-11	RES-CHIP	6.8	5%	1/16W
R931	1-216-820-11	METAL CHIP	820	5%	1/16W (CA400)
R931	1-216-821-11	METAL CHIP	1K	5%	1/16W (CA420X)
R932	1-216-820-11	METAL CHIP	820	5%	1/16W (CA400)
R932	1-216-821-11	METAL CHIP	1K	5%	1/16W (CA420X)
R933	1-216-820-11	METAL CHIP	820	5%	1/16W (CA400)
R933	1-216-821-11	METAL CHIP	1K	5%	1/16W (CA420X)
R934	1-216-819-11	METAL CHIP	680	5%	1/16W (CA400)
R934	1-216-817-11	METAL CHIP	470	5%	1/16W (CA420X)
R935	1-216-820-11	METAL CHIP	820	5%	1/16W (CA400)
R935	1-216-821-11	METAL CHIP	1K	5%	1/16W (CA420X)
R936	1-216-820-11	METAL CHIP	820	5%	1/16W
R940	1-216-795-11	RES-CHIP	6.8	5%	1/16W
R941	1-216-819-11	METAL CHIP	680	5%	1/16W (CA400)
R941	1-216-821-11	METAL CHIP	1K	5%	1/16W (CA420X)
R942	1-216-819-11	METAL CHIP	680	5%	1/16W (CA400)
R942	1-216-821-11	METAL CHIP	1K	5%	1/16W (CA420X)
R943	1-216-819-11	METAL CHIP	680	5%	1/16W (CA400)
R943	1-216-821-11	METAL CHIP	1K	5%	1/16W (CA420X)
R944	1-216-819-11	METAL CHIP	680	5%	1/16W
R945	1-216-819-11	METAL CHIP	680	5%	1/16W (CA400)
R945	1-216-821-11	METAL CHIP	1K	5%	1/16W (CA420X)
R946	1-216-821-11	METAL CHIP	1K	5%	1/16W
R951	1-216-820-11	METAL CHIP	820	5%	1/16W (CA400)
R951	1-216-821-11	METAL CHIP	1K	5%	1/16W (CA420X)
R952	1-216-820-11	METAL CHIP	820	5%	1/16W (CA400)
R952	1-216-821-11	METAL CHIP	1K	5%	1/16W (CA420X)
R953	1-216-820-11	METAL CHIP	820	5%	1/16W (CA400)
R953	1-216-821-11	METAL CHIP	1K	5%	1/16W (CA420X)
R954	1-216-819-11	METAL CHIP	680	5%	1/16W (CA400)
R954	1-216-817-11	METAL CHIP	470	5%	1/16W (CA420X)
R955	1-216-820-11	METAL CHIP	820	5%	1/16W (CA400)
R955	1-216-821-11	METAL CHIP	1K	5%	1/16W (CA420X)
R956	1-216-820-11	METAL CHIP	820	5%	1/16W
R964	1-216-819-11	METAL CHIP	680	5%	1/16W
R966	1-216-816-11	METAL CHIP	390	5%	1/16W
R976	1-216-816-11	METAL CHIP	390	5%	1/16W
R981	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R982	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R983	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R984	1-216-851-11	METAL CHIP	330K	5%	1/16W
R985	1-216-857-11	METAL CHIP	1M	5%	1/16W
R986	1-216-821-11	METAL CHIP	1K	5%	1/16W
R987	1-216-821-11	METAL CHIP	1K	5%	1/16W
R988	1-216-821-11	METAL CHIP	1K	5%	1/16W
R989	1-216-864-11	SHORT	0		

KEY **MAIN**

Ref. No.	Part No.	Description			Remark
		< SWITCH >			
S907	1-771-884-11	SWITCH, TACTILE (ATT)			
**********					
*	A-3326-775-A	MAIN BOARD, COMPLETE (CA400)			
*	A-3326-778-A	MAIN BOARD, COMPLETE (CA420X)			
		**********			
*	3-040-998-01	BRACKET (IC)			
*	3-224-897-11	HEAT SINK			
	7-685-794-09	SCREW +PTT 2.6X10 (S)			
		< CAPACITOR/SHORT >			
C1	1-216-295-11	SHORT	0		
C3	1-126-934-11	ELECT	220uF	20%	16V
C4	1-124-234-00	ELECT	22uF	20%	16V
C5	1-124-584-00	ELECT	100uF	20%	10V
C6	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C7	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C8	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C9	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C10	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C11	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C12	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C13	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C14	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C15	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C16	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C17	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C18	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C19	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C20	1-124-234-00	ELECT	22uF	20%	16V
C21	1-162-913-11	CERAMIC CHIP	8PF	0.5PF	50V
C22	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
C23	1-162-912-11	CERAMIC CHIP	7PF	0.5PF	50V
C24	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C25	1-124-233-11	ELECT	10uF	20%	16V
C26	1-124-234-00	ELECT	22uF	20%	16V
C27	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C28	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C29	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C30	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C51	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C52	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C53	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C54	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C55	1-124-234-00	ELECT	22uF	20%	16V
C56	1-124-234-00	ELECT	22uF	20%	16V
C57	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C58	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C62	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C100	1-216-295-11	SHORT	0		
C101	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C102	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C103	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C104	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C105	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C106	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C107	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C109	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C110	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C111	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C112	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C120	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C121	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C122	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C141	1-124-233-11	ELECT	10uF	20%	16V
C142	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C151	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V (CA400)
C151	1-104-509-11	CERAMIC CHIP	0.018uF	10%	16V (CA420X)
C152	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C153	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C171	1-124-233-11	ELECT	10uF	20%	16V
C174	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C175	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C181	1-124-233-11	ELECT	10uF	20%	16V
C183	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C184	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C185	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C191	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C201	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C202	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C203	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C204	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C205	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C206	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C207	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C209	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C210	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C212	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C241	1-124-233-11	ELECT	10uF	20%	16V
C242	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C250	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C251	1-104-509-11	CERAMIC CHIP	0.018uF	10%	16V (CA420X)
C251	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V (CA400)
C252	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C253	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C254	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C255	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C256	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C271	1-124-233-11	ELECT	10uF	20%	16V
C274	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C275	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C281	1-124-233-11	ELECT	10uF	20%	16V
C283	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C284	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C285	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C300	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C301	1-124-234-00	ELECT	22uF	20%	16V
C302	1-131-353-00	TANTALUM	10uF	10%	35V
C303	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C304	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V

MAIN

Ref. No.	Part No.	Description			Remark
C305	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C306	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C307	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C331	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C332	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C333	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C334	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C335	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C336	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C337	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C338	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C339	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C340	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C341	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C342	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C343	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C344	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C345	1-124-234-00	ELECT	22uF	20%	16V
C346	1-124-584-00	ELECT	100uF	20%	10V
C350	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C351	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C352	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C353	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C354	1-124-233-11	ELECT	10uF	20%	16V
C355	1-124-234-00	ELECT	22uF	20%	16V
C356	1-126-934-11	ELECT	220uF	20%	16V
C357	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C358	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C359	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C360	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C361	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C362	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C363	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C364	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C365	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C366	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C367	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C368	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C369	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C501	1-124-589-11	ELECT	47uF	20%	16V
C503	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C504	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C505	1-164-160-11	CERAMIC CHIP	20PF	5%	50V
C506	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C507	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C509	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C511	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C515	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C532	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C550	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C551	1-125-710-11	DOUBLE LAYER	0.1F		5.5V
C552	1-126-934-11	ELECT	220uF	20%	16V
C553	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C554	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C571	1-126-160-11	ELECT	1uF	20%	50V
C581	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C582	1-126-934-11	ELECT	220uF	20%	16V
C611	1-124-233-11	ELECT	10uF	20%	16V
C612	1-124-233-11	ELECT	10uF	20%	16V
C614	1-124-233-11	ELECT	10uF	20%	16V
C615	1-124-233-11	ELECT	10uF	20%	16V
C616	1-124-233-11	ELECT	10uF	20%	16V
C617	1-124-233-11	ELECT	10uF	20%	16V
C622	1-124-589-11	ELECT	47uF	20%	16V
C623	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C701	1-162-227-11	CERAMIC CHIP	3.9PF	10%	50V
C702	1-162-227-11	CERAMIC CHIP	3.9PF	10%	50V
C703	1-162-227-11	CERAMIC CHIP	3.9PF	10%	50V
C705	1-162-227-11	CERAMIC CHIP	3.9PF	10%	50V
C707	1-162-227-11	CERAMIC CHIP	3.9PF	10%	50V
C708	1-162-227-11	CERAMIC CHIP	3.9PF	10%	50V
C709	1-162-227-11	CERAMIC CHIP	3.9PF	10%	50V
C710	1-162-227-11	CERAMIC CHIP	3.9PF	10%	50V
C752	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C753	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C754	1-126-157-11	ELECT	10uF	20%	16V
C755	1-126-157-11	ELECT	10uF	20%	16V
C756	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C781	1-107-885-31	ELECT	3300uF	20%	16V
C782	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C783	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C786	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C787	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C999	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CN301	1-785-694-11	CONNECTOR, FFC/FPC 7P			
* CN351	1-506-995-11	PIN, CONNECTOR (PC BOARD) 13P			
CN581	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)			
CN701	1-794-311-21	PLUG, CONNECTOR 12P			
CN781	1-774-701-11	PIN, CONNECTOR 16P			
		< SURGE PROTECTOR >			
CP1	1-803-902-21	PROTECTOR CHIP, SURGE			
		< DIODE >			
D1	8-719-040-04	DIODE MA721WK- (TX)			
D2	8-719-914-42	DIODE DA204K			
D51	8-719-977-03	DIODE DTZ5.6B			
D52	8-719-423-10	DIODE MA8100-M-TX			
D351	8-719-422-97	DIODE MA8091-M			
D352	8-719-970-02	DIODE 1SR139-400			
D501	8-719-073-01	DIODE MA111- (K8).S0			
D552	8-719-067-56	DIODE MA112-TX			
D581	8-719-057-80	DIODE MA8180-M-TX			
D582	8-719-422-64	DIODE MA8062-M			
D584	8-719-057-80	DIODE MA8180-M-TX			
D585	8-719-072-70	DIODE MA2ZD14001S0			
D586	8-719-057-80	DIODE MA8180-M-TX			
D610	8-719-970-02	DIODE 1SR139-400			
D611	8-719-970-02	DIODE 1SR139-400			
D613	8-719-970-02	DIODE 1SR139-400			
D614	8-719-970-02	DIODE 1SR139-400			
D622	8-719-073-01	DIODE MA111- (K8).S0			
D624	8-719-422-64	DIODE MA8062-M			

MAIN

Ref. No.	Part No.	Description				Remark
D703	8-719-109-97	DIODE	RD6.8ESB2			
D704	8-719-109-97	DIODE	RD6.8ESB2			
D705	8-719-109-97	DIODE	RD6.8ESB2			
D706	8-719-034-94	DIODE	MA4180-M (QZ)			
D707	8-719-109-97	DIODE	RD6.8ESB2			
D708	8-719-109-97	DIODE	RD6.8ESB2			
D709	8-719-109-97	DIODE	RD6.8ESB2			
D710	8-719-977-12	DIODE	DTZ6.8B			
D721	8-719-079-42	DIODE	1ZB22 (TPA3)			
D722	8-719-079-42	DIODE	1ZB22 (TPA3)			
D723	8-719-079-42	DIODE	1ZB22 (TPA3)			
D724	8-719-079-42	DIODE	1ZB22 (TPA3)			
D731	8-719-079-42	DIODE	1ZB22 (TPA3)			
D732	8-719-079-42	DIODE	1ZB22 (TPA3)			
D733	8-719-079-42	DIODE	1ZB22 (TPA3)			
D734	8-719-079-42	DIODE	1ZB22 (TPA3)			
D781	8-719-049-38	DIODE	1N5404TU			
		< IC >				
IC1	8-759-586-59	IC	TB2118F-EL-S			
IC301	8-752-079-78	IC	CXA2509AQ-T4			
IC330	8-759-827-11	IC	LC75421M-TLM			
IC351	8-759-527-33	IC	LB1930M-TLM			
IC501	8-759-828-81	IC	MN101C49GTG			
IC551	8-759-682-69	IC	XC61CN4302MR			
IC581	8-759-449-89	IC	BA8270F-E2			
IC611	8-759-347-49	IC	BA3918-V2			
IC751	8-759-827-14	IC	TA8268AH			
		< JACK >				
J1	1-815-185-11	JACK (ANT) (FM/AM ANTENNA IN)				
J331	1-774-699-12	JACK, PIN 4P (BUS AUDIO IN, AUDIO OUT)				
		< RESISTOR/CAPACITOR >				
JC1	1-216-295-11	SHORT	0			
JC18	1-216-296-11	SHORT	0			
JC28	1-216-296-11	SHORT	0			
JC41	1-216-296-11	SHORT	0			
JC49	1-216-295-11	SHORT	0			
JC50	1-216-296-11	SHORT	0			
JC51	1-216-295-11	SHORT	0			
JC52	1-216-296-11	SHORT	0			
JC55	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V	
JC56	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V	
JC57	1-216-295-11	SHORT	0			
JC58	1-216-295-11	SHORT	0			
JC60	1-216-296-11	SHORT	0			
JC62	1-216-295-11	SHORT	0			
JC63	1-216-295-11	SHORT	0			
JC64	1-216-296-11	SHORT	0			
JC121	1-216-296-11	SHORT	0			
JC141	1-216-296-11	SHORT	0			
JC160	1-216-296-11	SHORT	0			
JC171	1-216-296-11	SHORT	0			
JC172	1-216-296-11	SHORT	0			
JC181	1-216-296-11	SHORT	0			
JC182	1-216-296-11	SHORT	0			

Ref. No.	Part No.	Description				Remark
JC251	1-216-296-11	SHORT	0			
JC302	1-216-295-11	SHORT	0			
JC303	1-216-295-11	SHORT	0			
JC330	1-216-296-11	SHORT	0			
JC331	1-216-295-11	SHORT	0			
JC332	1-216-295-11	SHORT	0			
JC333	1-216-296-11	SHORT	0			
JC334	1-216-296-11	SHORT	0			
JC335	1-216-295-11	SHORT	0			
JC336	1-216-296-11	SHORT	0			
JC351	1-216-295-11	SHORT	0			
JC501	1-216-296-11	SHORT	0			
JC502	1-216-295-11	SHORT	0			
JC503	1-216-296-11	SHORT	0			
JC504	1-216-295-11	SHORT	0			
JC505	1-216-845-11	METAL CHIP	100K	5%	1/16W	
JC506	1-216-296-11	SHORT	0			
JC520	1-216-296-11	SHORT	0			
JC533	1-216-295-11	SHORT	0 (CA420X)			
JC534	1-216-296-11	SHORT	0 (CA420X)			
JC540	1-216-295-11	SHORT	0			
JC541	1-216-295-11	SHORT	0			
JC550	1-216-295-11	SHORT	0			
JC551	1-216-296-11	SHORT	0			
JC552	1-216-295-11	SHORT	0			
JC557	1-216-296-11	SHORT	0			
JC560	1-216-296-11	SHORT	0			
JC561	1-216-296-11	SHORT	0			
JC563	1-216-295-11	SHORT	0			
JC565	1-216-295-11	SHORT	0 (CA400)			
JC576	1-216-296-11	SHORT	0			
JC580	1-216-295-11	SHORT	0			
JC581	1-216-295-11	SHORT	0			
JC582	1-216-295-11	SHORT	0			
JC584	1-216-296-11	SHORT	0			
JC585	1-216-296-11	SHORT	0			
JC586	1-216-296-11	SHORT	0			
JC588	1-216-295-11	SHORT	0			
JC601	1-216-295-11	SHORT	0			
JC602	1-216-295-11	SHORT	0			
JC603	1-216-295-11	SHORT	0			
JC611	1-216-295-11	SHORT	0			
JC612	1-216-295-11	SHORT	0			
JC621	1-216-296-11	SHORT	0			
JC622	1-216-295-11	SHORT	0			
JC705	1-216-295-11	SHORT	0			
JC709	1-216-296-11	SHORT	0			
JC710	1-216-296-11	SHORT	0			
JC752	1-216-296-11	SHORT	0			
JC755	1-216-296-11	SHORT	0			
JC756	1-216-295-11	SHORT	0			
JC782	1-216-296-11	SHORT	0			
		< COIL/SHORT >				
L1	1-410-502-11	INDUCTOR	2.7uH			
L2	1-412-957-11	INDUCTOR	33uH			
L50	1-410-989-11	INDUCTOR	0.47uH			
L51	1-410-509-31	INDUCTOR	10uH			

MAIN

Ref. No.	Part No.	Description			Remark
L100	1-424-759-11	COIL (AM ANT)			
L501	1-410-501-11	INDUCTOR	2.2uH		
L755	1-216-295-11	SHORT	0		
L781	1-419-476-11	INDUCTOR	250uH		
		< TRANSISTOR >			
Q51	8-729-106-68	TRANSISTOR	2SD1615A-GP		
Q52	8-729-106-68	TRANSISTOR	2SD1615A-GP		
Q53	8-729-047-76	TRANSISTOR	FMC2A-T148		
Q55	8-729-900-53	TRANSISTOR	DTC114EK		
Q171	8-729-920-21	TRANSISTOR	DTC314TKH04		
Q181	8-729-920-21	TRANSISTOR	DTC314TKH04		
Q271	8-729-920-21	TRANSISTOR	DTC314TKH04		
Q281	8-729-920-21	TRANSISTOR	DTC314TKH04		
Q351	8-729-015-11	TRANSISTOR	2SD1802FAST-TL		
Q352	8-729-047-76	TRANSISTOR	FMC2A-T148		
Q353	8-729-900-53	TRANSISTOR	DTC114EK		
Q354	8-729-106-60	TRANSISTOR	2SB1115A-YQ		
Q551	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q571	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q581	8-729-900-53	TRANSISTOR	DTC114EK		
Q601	8-729-106-60	TRANSISTOR	2SB1115A-YQ		
Q602	8-729-027-59	TRANSISTOR	DTC144EKA-T146		
Q621	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q622	8-729-021-94	TRANSISTOR	2SK1657-T1B		
		< RESISTOR >			
R1	1-216-821-11	METAL CHIP	1K	5%	1/16W
R3	1-216-811-11	METAL CHIP	150	5%	1/16W
R11	1-216-834-11	METAL CHIP	12K	5%	1/16W
R12	1-216-835-11	METAL CHIP	15K	5%	1/16W
R13	1-216-809-11	METAL CHIP	100	5%	1/16W
R14	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R15	1-216-821-11	METAL CHIP	1K	5%	1/16W
R16	1-216-833-11	METAL CHIP	10K	5%	1/16W
R17	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R18	1-216-841-11	METAL CHIP	47K	5%	1/16W
R51	1-216-821-11	METAL CHIP	1K	5%	1/16W
R52	1-216-813-11	METAL CHIP	220	5%	1/16W
R53	1-216-821-11	METAL CHIP	1K	5%	1/16W
R54	1-216-821-11	METAL CHIP	1K	5%	1/16W
R55	1-216-841-11	METAL CHIP	47K	5%	1/16W
R56	1-216-817-11	METAL CHIP	470	5%	1/16W
R57	1-249-401-11	CARBON	47	5%	1/4W
R58	1-249-385-11	CARBON	2.2	5%	1/6W
R60	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R61	1-216-821-11	METAL CHIP	1K	5%	1/16W
R62	1-216-815-11	METAL CHIP	330	5%	1/16W
R101	1-216-817-11	METAL CHIP	470	5%	1/16W
R102	1-216-851-11	METAL CHIP	330K	5%	1/16W
R103	1-216-835-11	METAL CHIP	15K	5%	1/16W
R104	1-216-836-11	METAL CHIP	18K	5%	1/16W
R111	1-216-845-11	METAL CHIP	100K	5%	1/16W
R112	1-216-845-11	METAL CHIP	100K	5%	1/16W
R121	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R141	1-216-833-11	METAL CHIP	10K	5%	1/16W
R142	1-216-809-11	METAL CHIP	100	5%	1/16W

Ref. No.	Part No.	Description			Remark
R151	1-216-821-11	METAL CHIP	1K	5%	1/16W
R152	1-216-837-11	METAL CHIP	22K	5%	1/16W
R171	1-216-809-11	METAL CHIP	100	5%	1/16W
R175	1-216-841-11	METAL CHIP	47K	5%	1/16W
R176	1-216-809-11	METAL CHIP	100	5%	1/16W
R177	1-216-821-11	METAL CHIP	1K	5%	1/16W
R181	1-216-809-11	METAL CHIP	100	5%	1/16W
R185	1-216-841-11	METAL CHIP	47K	5%	1/16W
R186	1-216-809-11	METAL CHIP	100	5%	1/16W
R187	1-216-821-11	METAL CHIP	1K	5%	1/16W
R191	1-216-841-11	METAL CHIP	47K	5%	1/16W
R192	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R201	1-216-817-11	METAL CHIP	470	5%	1/16W
R202	1-216-851-11	METAL CHIP	330K	5%	1/16W
R203	1-216-835-11	METAL CHIP	15K	5%	1/16W
R204	1-216-836-11	METAL CHIP	18K	5%	1/16W
R211	1-216-845-11	METAL CHIP	100K	5%	1/16W
R212	1-216-845-11	METAL CHIP	100K	5%	1/16W
R241	1-216-833-11	METAL CHIP	10K	5%	1/16W
R242	1-216-809-11	METAL CHIP	100	5%	1/16W
R251	1-216-821-11	METAL CHIP	1K	5%	1/16W
R252	1-216-837-11	METAL CHIP	22K	5%	1/16W
R271	1-216-809-11	METAL CHIP	100	5%	1/16W
R275	1-216-841-11	METAL CHIP	47K	5%	1/16W
R277	1-216-821-11	METAL CHIP	1K	5%	1/16W
R281	1-216-809-11	METAL CHIP	100	5%	1/16W
R285	1-216-841-11	METAL CHIP	47K	5%	1/16W
R287	1-216-821-11	METAL CHIP	1K	5%	1/16W
R301	1-216-836-11	METAL CHIP	18K	5%	1/16W
R302	1-216-845-11	METAL CHIP	100K	5%	1/16W
R303	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R304	1-216-835-11	METAL CHIP	15K	5%	1/16W
R305	1-216-797-11	METAL CHIP	10	5%	1/16W
R306	1-216-849-11	METAL CHIP	220K	5%	1/16W
R331	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R332	1-216-834-11	METAL CHIP	12K	5%	1/16W
R333	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R334	1-216-834-11	METAL CHIP	12K	5%	1/16W
R350	1-216-809-11	METAL CHIP	100	5%	1/16W
R351	1-216-821-11	METAL CHIP	1K	5%	1/16W
R352	1-249-383-11	CARBON	1.5	5%	1/6W
R353	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R354	1-216-833-11	METAL CHIP	10K	5%	1/16W
R359	1-216-809-11	METAL CHIP	100	5%	1/16W
R360	1-216-809-11	METAL CHIP	100	5%	1/16W
R361	1-216-809-11	METAL CHIP	100	5%	1/16W
R362	1-216-821-11	METAL CHIP	1K	5%	1/16W
R363	1-216-821-11	METAL CHIP	1K	5%	1/16W
R364	1-216-821-11	METAL CHIP	1K	5%	1/16W
R365	1-216-821-11	METAL CHIP	1K	5%	1/16W
R502	1-216-845-11	METAL CHIP	100K	5%	1/16W
R503	1-216-837-11	METAL CHIP	22K	5%	1/16W
R507	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R508	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R509	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R512	1-216-845-11	METAL CHIP	100K	5%	1/16W
R516	1-216-845-11	METAL CHIP	100K	5%	1/16W
R517	1-216-845-11	METAL CHIP	100K	5%	1/16W

MAIN

Ref. No.	Part No.	Description			Remark
R520	1-216-821-11	METAL CHIP	1K	5%	1/16W
R521	1-216-821-11	METAL CHIP	1K	5%	1/16W
R522	1-216-821-11	METAL CHIP	1K	5%	1/16W
R523	1-216-821-11	METAL CHIP	1K	5%	1/16W
R526	1-216-845-11	METAL CHIP	100K	5%	1/16W
R527	1-216-845-11	METAL CHIP	100K	5%	1/16W
R528	1-216-845-11	METAL CHIP	100K	5%	1/16W
R529	1-216-845-11	METAL CHIP	100K	5%	1/16W
R530	1-216-845-11	METAL CHIP	100K	5%	1/16W
R533	1-216-845-11	METAL CHIP	100K	5%	1/16W (CA420X)
R534	1-216-845-11	METAL CHIP	100K	5%	1/16W (CA400)
R535	1-249-417-11	CARBON	1K	5%	1/4W
R536	1-216-845-11	METAL CHIP	100K	5%	1/16W
R537	1-216-845-11	METAL CHIP	100K	5%	1/16W
R538	1-216-813-11	METAL CHIP	220	5%	1/16W
R539	1-216-845-11	METAL CHIP	100K	5%	1/16W
R540	1-216-845-11	METAL CHIP	100K	5%	1/16W
R541	1-216-845-11	METAL CHIP	100K	5%	1/16W
R542	1-216-845-11	METAL CHIP	100K	5%	1/16W
R543	1-216-845-11	METAL CHIP	100K	5%	1/16W
R544	1-216-821-11	METAL CHIP	1K	5%	1/16W
R546	1-216-845-11	METAL CHIP	100K	5%	1/16W
R547	1-216-845-11	METAL CHIP	100K	5%	1/16W
R548	1-216-841-11	METAL CHIP	47K	5%	1/16W (CA420X)
R550	1-216-845-11	METAL CHIP	100K	5%	1/16W
R551	1-216-845-11	METAL CHIP	100K	5%	1/16W
R555	1-208-806-11	RES-CHIP	10K	0.5%	1/10W
R556	1-208-806-11	RES-CHIP	10K	0.5%	1/10W
R557	1-216-845-11	METAL CHIP	100K	5%	1/16W
R558	1-216-813-11	METAL CHIP	220	5%	1/16W
R560	1-216-845-11	METAL CHIP	100K	5%	1/16W
R562	1-216-833-11	METAL CHIP	10K	5%	1/16W
R563	1-216-809-11	METAL CHIP	100	5%	1/16W
R564	1-216-809-11	METAL CHIP	100	5%	1/16W
R565	1-216-845-11	METAL CHIP	100K	5%	1/16W (CA400)
R566	1-216-845-11	METAL CHIP	100K	5%	1/16W (CA420X)
R567	1-216-821-11	METAL CHIP	1K	5%	1/16W
R568	1-216-821-11	METAL CHIP	1K	5%	1/16W
R569	1-216-821-11	METAL CHIP	1K	5%	1/16W
R570	1-216-821-11	METAL CHIP	1K	5%	1/16W
R571	1-216-841-11	METAL CHIP	47K	5%	1/16W
R573	1-249-425-11	CARBON	4.7K	5%	1/4W
R574	1-216-841-11	METAL CHIP	47K	5%	1/16W
R575	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R576	1-216-821-11	METAL CHIP	1K	5%	1/16W
R577	1-216-845-11	METAL CHIP	100K	5%	1/16W
R578	1-216-833-11	METAL CHIP	10K	5%	1/16W
R579	1-216-821-11	METAL CHIP	1K	5%	1/16W
R580	1-216-809-11	METAL CHIP	100	5%	1/16W
R581	1-216-821-11	METAL CHIP	1K	5%	1/16W
R582	1-216-835-11	METAL CHIP	15K	5%	1/16W
R583	1-216-809-11	METAL CHIP	100	5%	1/16W
R584	1-216-805-11	METAL CHIP	47	5%	1/16W
R585	1-216-841-11	METAL CHIP	47K	5%	1/16W
R590	1-216-845-11	METAL CHIP	100K	5%	1/16W
R591	1-216-821-11	METAL CHIP	1K	5%	1/16W
R592	1-216-821-11	METAL CHIP	1K	5%	1/16W
R593	1-216-821-11	METAL CHIP	1K	5%	1/16W
R594	1-216-821-11	METAL CHIP	1K	5%	1/16W
R595	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R596	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R597	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R598	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R601	1-249-397-11	CARBON	22	5%	1/4W
R602	1-249-397-11	CARBON	22	5%	1/4W
R603	1-249-397-11	CARBON	22	5%	1/4W
R604	1-249-397-11	CARBON	22	5%	1/4W
R606	1-216-073-00	METAL CHIP	10K	5%	1/10W
R607	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R608	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R609	1-216-821-11	METAL CHIP	1K	5%	1/16W
R610	1-216-821-11	METAL CHIP	1K	5%	1/16W
R611	1-216-821-11	METAL CHIP	1K	5%	1/16W
R620	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R622	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R623	1-216-805-11	METAL CHIP	47	5%	1/16W
R704	1-216-809-11	METAL CHIP	100	5%	1/16W
R705	1-216-809-11	METAL CHIP	100	5%	1/16W
R706	1-216-821-11	METAL CHIP	1K	5%	1/16W
R707	1-216-821-11	METAL CHIP	1K	5%	1/16W
R708	1-216-821-11	METAL CHIP	1K	5%	1/16W
R710	1-216-797-11	METAL CHIP	10	5%	1/16W
R751	1-249-417-11	CARBON	1K	5%	1/4W
R753	1-216-833-11	METAL CHIP	10K	5%	1/16W

< SWITCH >

S530	1-571-478-11	SWITCH, SLIDE (FREQUENCY SELECT)	(CA420X)
S551	1-692-431-21	SWITCH, TACTILE (RESET)	

< THERMISTOR >

TH501	1-803-350-21	THERMISTOR, POSITIVE	

< TUNER >

TU1	1-693-511-11	FM/AM TUNER UNIT (FAE347-A13)	

< VIBRATOR >

X1	1-781-246-21	VIBRATOR, CRYSTAL (10.25MHz)	
X501	1-795-134-11	VIBRATOR, CRYSTAL (18.432MHz)	
X502	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)	

****

MISCELLANEOUS

****

17	1-776-206-21	CORD (WITH CONNECTOR) (POWER)	
60	1-694-781-11	CONDUCTIVE BOARD, CONNECTION	
F781	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	
HP901	1-500-157-21	HEAD, MAGNETIC (PLAYBACK)	
LCD901	1-804-298-11	DISPLAY PANEL, LIQUID CRYSTAL	
M901	A-3291-665-A	MOTOR ASSY, MAIN (CAPSTAN/REEL)	

Ref. No.	Part No.	Description	Remark
TU1	1-693-511-11	FM/AM TUNER UNIT (FAE347-A13)	

****

****
HARDWARE LIST
****

#1	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#2	7-685-791-09	SCREW +PTT 2.6X5 (S)	
#3	7-685-794-09	SCREW +PTT 2.6X10 (S)	
#4	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT	
#6	7-624-104-04	STOP RING 2.0, TYPE -E	
#7	7-627-553-17	PRECISION SCREW +P 2X2 TYPE 3	

****

ACCESSORIES & PACKING MATERIALS
****

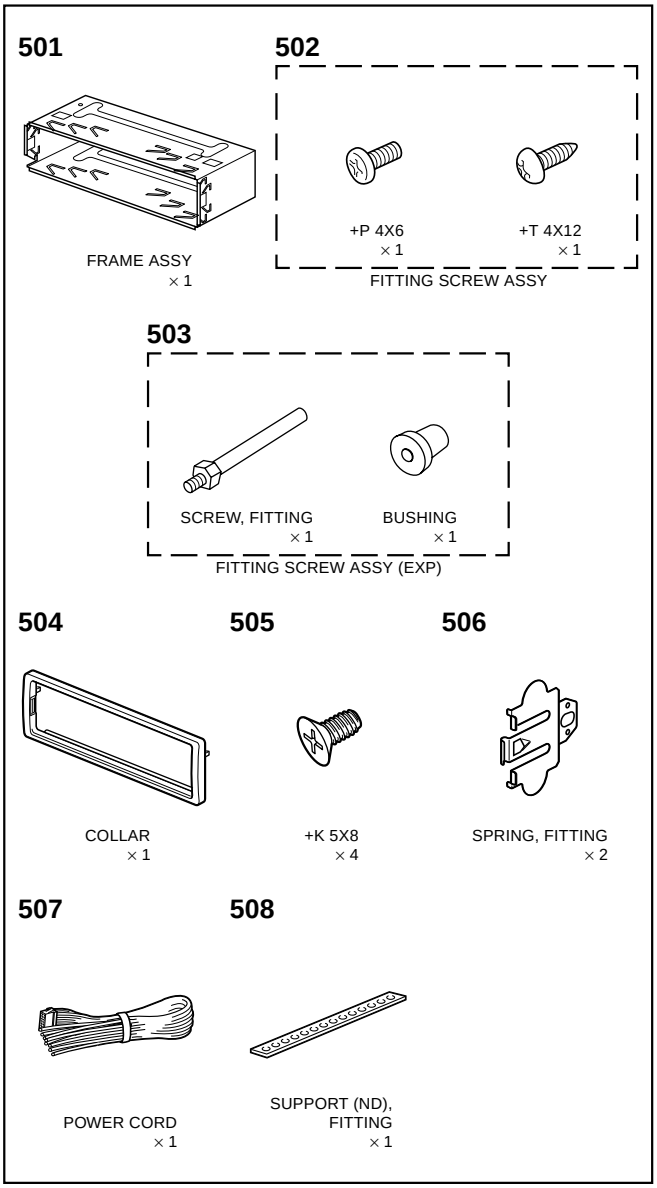
3-226-699-11	MANUAL, INSTRUCTION (ENGLISH) (CA400)	
3-226-699-21	MANUAL, INSTRUCTION (FRENCH) (CA400)	
3-226-699-31	MANUAL, INSTRUCTION (ENGLISH, SPANISH, TRADITIONAL CHINESE) (CA420X)	
3-226-700-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH) (CA400)	
3-226-700-21	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, TRADITIONAL CHINESE) (CA420X)	
X-3378-490-1	CASE (PANEL) ASSY (for FRONT PANEL)	

****

Ref. No.	Part No.	Description	Remark

PARTS FOR INSTALLATION AND CONNECTIONS
****

501	X-3373-602-1	FRAME ASSY
502	X-3368-725-1	SCREW ASSY, FITTING (CA400)
503	X-3366-405-1	SCREW ASSY (EXP), FITTING (CA420X)
504	3-225-732-01	COLLAR
505	3-934-325-01	SCREW, +K (5X8) TAPPING
506	3-041-000-01	SPRING, FITTING
507	1-776-206-21	CORD (WITH CONNECTOR) (POWER)
508	3-924-961-01	SUPPORT (ND), FITTING (CA400)



XR-CA400/CA420X

SONY

SERVICE MANUAL

Ver 1.2 2001.06

US Model
Canadian Model
XR-CA400
E Model
XR-CA420X

SUPPLEMENT-1

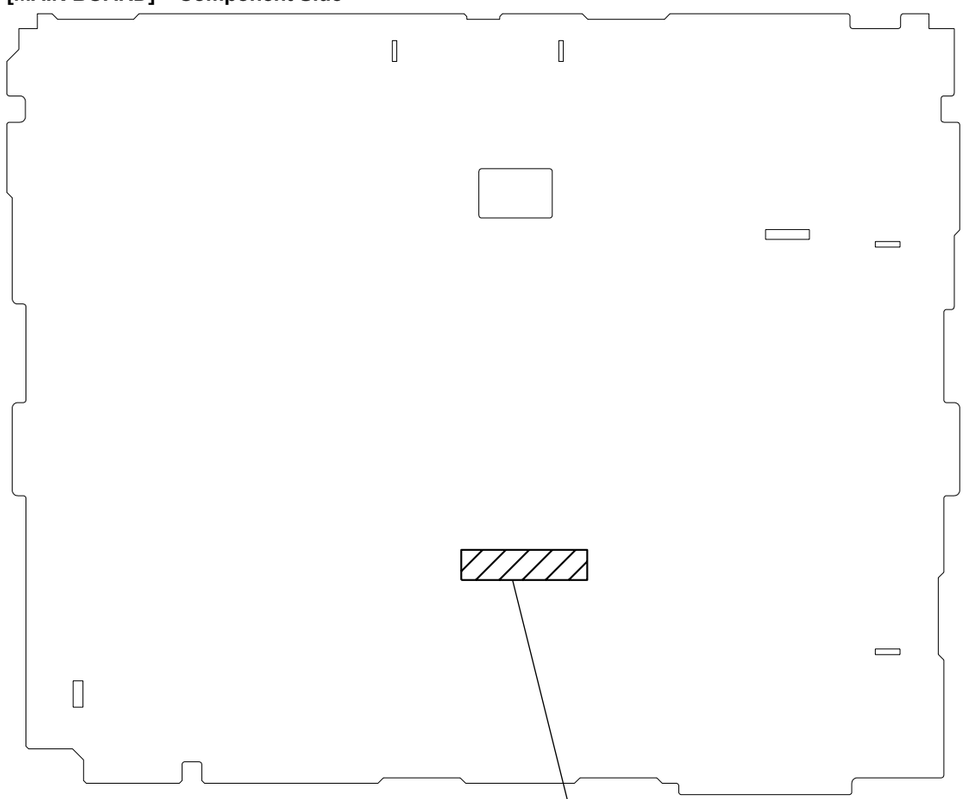
File this supplement with the service manual.

Subject: Change of MAIN board

(ECN-CSA04847)

- **NEW/FORMER DISCRIMINATION**

[MAIN BOARD] – Component Side –



NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:

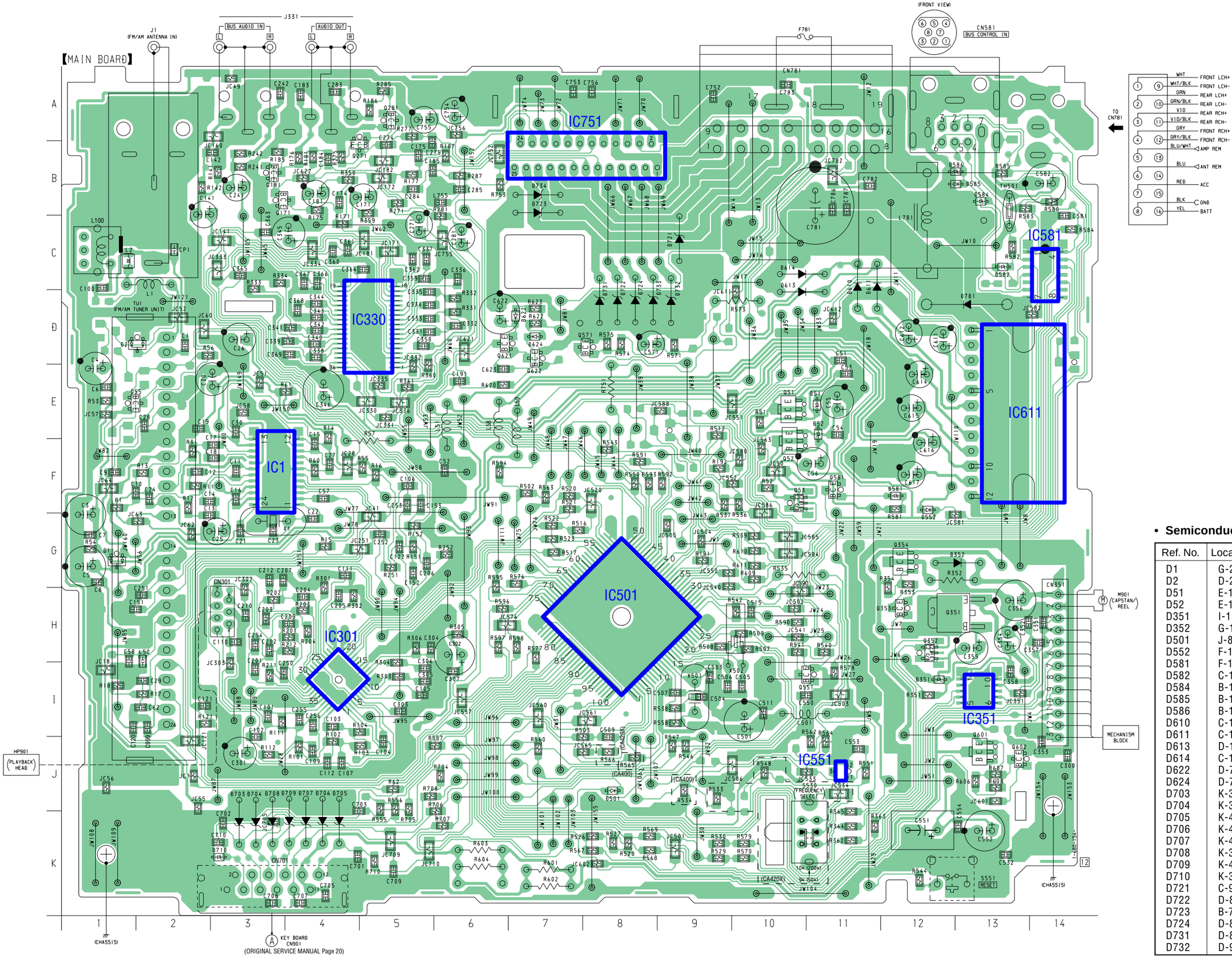
- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ▬ : Pattern from the side which enables seeing.

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ▭ : panel designation.
- ▬ : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM
  ⟨⟨ ⟩⟩ : TAPE PLAYBACK
  ✻ : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : AM
  Σ : TAPE PLAYBACK
  ⇨ : BUS AUDIO IN

PRINTED WIRING BOARD – MAIN Board –



- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D1	G-2	D733	D-8
D2	D-2	D734	B-7
D51	E-11	D781	D-13
D52	E-11		
D351	I-12	IC1	F-3
D352	G-13	IC301	I-4
D501	J-8	IC330	D-5
D552	F-12	IC351	I-13
D581	F-12	IC501	H-8
D582	C-13	IC551	J-11
D584	B-13	IC581	C-14
D585	B-13	IC611	E-13
D586	B-13	IC751	A-8
D610	C-11		
D611	C-11	Q51	E-10
D613	D-10	Q52	F-10
D614	C-10	Q53	F-10
D622	D-7	Q55	E-1
D624	D-7	Q171	B-3
D703	K-3	Q181	B-3
D704	K-3	Q271	B-5
D705	K-4	Q281	A-5
D706	K-4	Q351	H-12
D707	K-4	Q352	H-12
D708	K-3	Q353	H-12
D709	K-4	Q354	G-12
D710	K-3	Q551	I-11
D721	C-9	Q571	D-8
D722	D-8	Q581	F-11
D723	B-7	Q601	J-13
D724	D-8	Q602	J-13
D731	D-8	Q621	D-6
D732	D-9	Q622	D-7

SCHEMATIC DIAGRAM – MAIN Board (1/3) –

【MAIN BOARD】(1/3)

TU1 FAE347-A13 (FM/AM TUNER UNIT)

IC1 FM/AM PLL IC B/D — TB2118F

IC330 IC B/D — LC75421M — INPUT SELECT. ELECTRICAL VOLUME

IC751 POWER AMP — TA8268AH

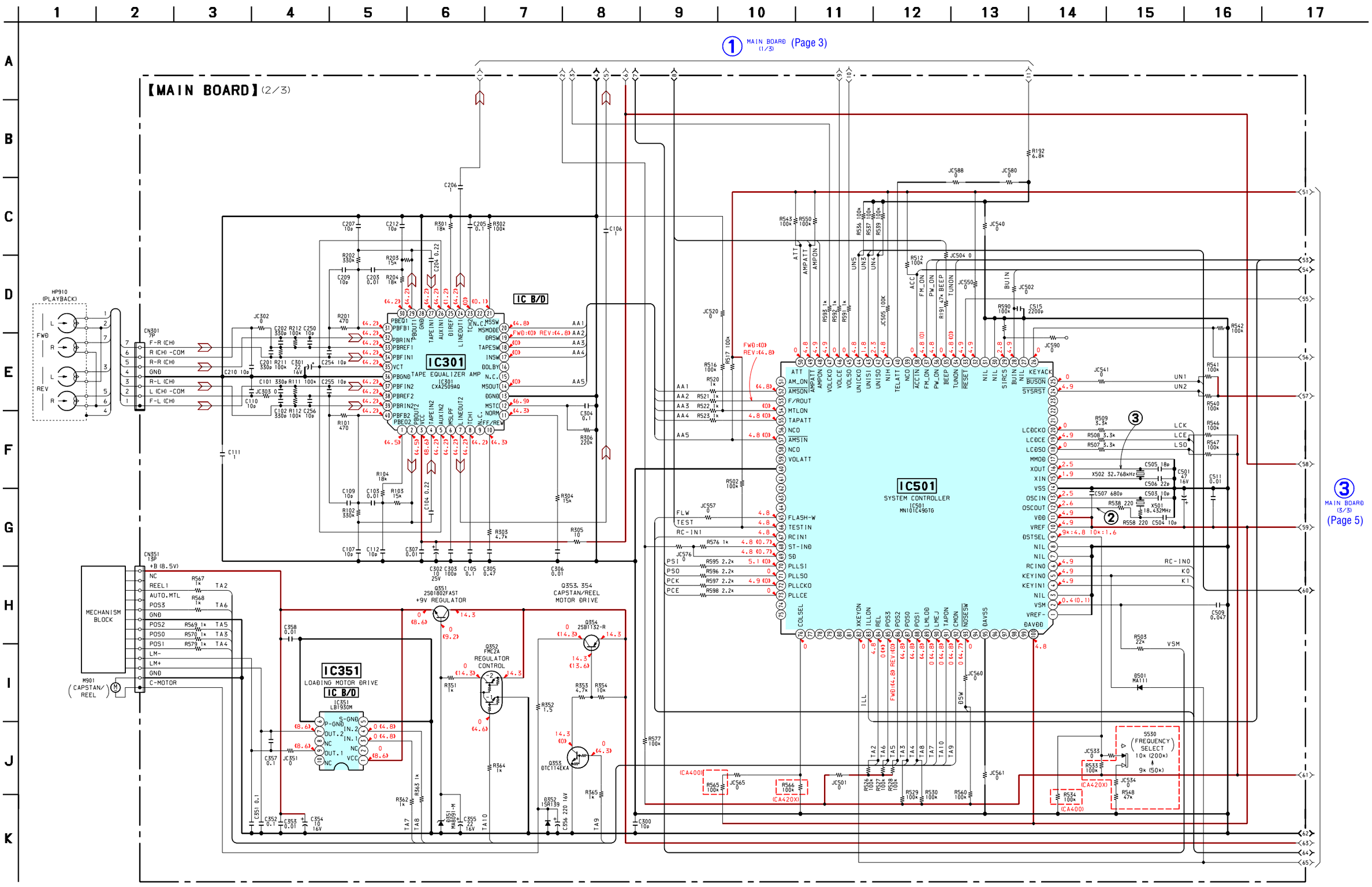
J331 4P — BUS AUDIO IN / AUDIO OUT

CN781 16P

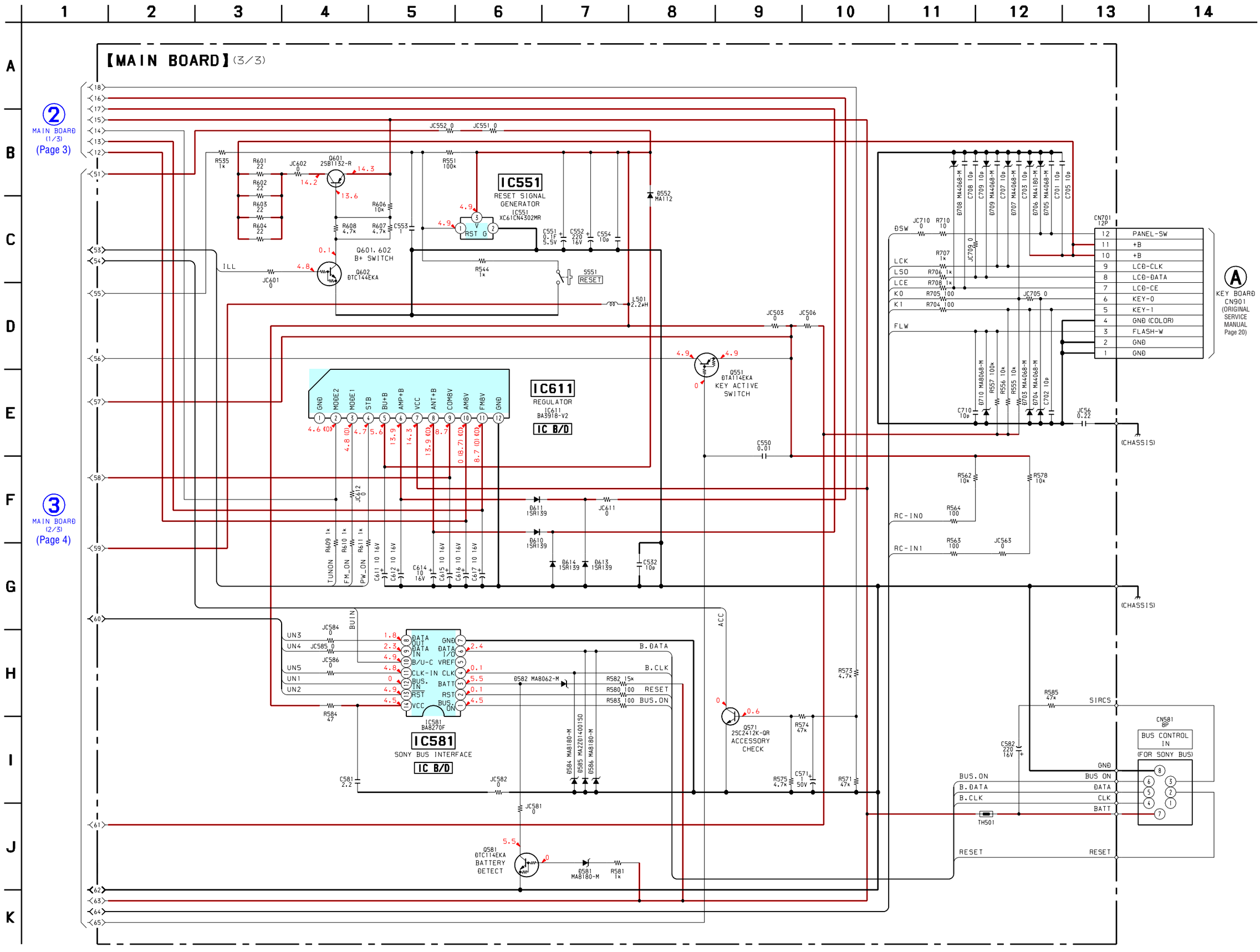
1 MAIN BOARD (2/3) (Page 4)

2 MAIN BOARD (3/3) (Page 5)

SCHEMATIC DIAGRAM – MAIN Board (2/3) –



SCHEMATIC DIAGRAM – MAIN Board (3/3) –



MAIN

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	A-3326-775-A	MAIN BOARD, COMPLETE (CA400)			
*	A-3326-778-A	MAIN BOARD, COMPLETE (CA420X)			
		**********			
*	3-040-998-01	BRACKET (IC)			
*	3-224-897-11	HEAT SINK			
	7-685-794-09	SCREW +PTT 2.6X10 (S)			
		< CAPACITOR >			
C1	1-216-295-11	SHORT	0		
C3	1-126-934-11	ELECT	220uF	20%	16V
C4	1-124-234-00	ELECT	22uF	20%	16V
C5	1-124-584-00	ELECT	100uF	20%	10V
C6	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C7	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C8	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C9	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C10	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C11	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C12	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C13	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C14	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C15	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C16	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C17	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C18	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C19	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C20	1-124-234-00	ELECT	22uF	20%	16V
C21	1-162-913-11	CERAMIC CHIP	8PF	0.5PF	50V
C22	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
C23	1-162-912-11	CERAMIC CHIP	7PF	0.5PF	50V
C24	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C25	1-124-233-11	ELECT	10uF	20%	16V
C26	1-124-234-00	ELECT	22uF	20%	16V
C27	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C28	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C29	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C30	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C51	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C52	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C53	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C54	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C55	1-124-234-00	ELECT	22uF	20%	16V
C56	1-124-234-00	ELECT	22uF	20%	16V
C57	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C58	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C62	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C100	1-216-295-11	SHORT	0		
C101	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C102	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C103	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C104	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C105	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C106	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C107	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C109	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C110	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C111	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C112	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C120	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C121	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C122	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C141	1-124-233-11	ELECT	10uF	20%	16V
C142	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C151	1-104-509-11	CERAMIC CHIP	0.018uF	10%	16V (CA420X)
C151	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V (CA400)
C152	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C153	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C171	1-124-233-11	ELECT	10uF	20%	16V
C174	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C175	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C181	1-124-233-11	ELECT	10uF	20%	16V
C183	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C184	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C185	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C191	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C201	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C202	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C203	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C204	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C205	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C206	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C207	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C209	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C210	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C212	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V

MAIN

Ref. No.	Part No.	Description			Remark
C241	1-124-233-11	ELECT	10uF	20%	16V
C242	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C250	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C251	1-104-509-11	CERAMIC CHIP	0.018uF	10%	16V (CA420X)
C251	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V (CA400)
C252	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C253	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C254	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C255	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C256	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C271	1-124-233-11	ELECT	10uF	20%	16V
C274	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C275	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C281	1-124-233-11	ELECT	10uF	20%	16V
C283	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C284	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C285	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C300	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C301	1-124-234-00	ELECT	22uF	20%	16V
C302	1-131-353-00	TANTALUM	10uF	10%	35V
C303	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C304	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C305	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C306	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C307	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C331	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C332	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C333	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C334	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C335	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C336	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C337	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C338	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C339	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C340	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C341	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C342	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C343	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C344	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C345	1-124-234-00	ELECT	22uF	20%	16V
C346	1-124-584-00	ELECT	100uF	20%	10V
C350	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C351	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C352	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C353	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C354	1-124-233-11	ELECT	10uF	20%	16V
C355	1-124-234-00	ELECT	22uF	20%	16V
C356	1-126-934-11	ELECT	220uF	20%	16V
C357	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C358	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C359	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C360	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C361	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C362	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C363	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C364	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C365	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C366	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C367	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C368	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C369	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C501	1-124-589-11	ELECT	47uF	20%	16V
C503	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C504	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C505	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C506	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C507	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C509	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C511	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C515	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C532	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C550	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C551	1-125-710-11	DOUBLE LAYER	0.1F		5.5V
C552	1-126-934-11	ELECT	220uF	20%	16V
C553	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C554	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C571	1-126-160-11	ELECT	1uF	20%	50V
C581	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C582	1-126-934-11	ELECT	220uF	20%	16V
C611	1-124-233-11	ELECT	10uF	20%	16V
C612	1-124-233-11	ELECT	10uF	20%	16V
C614	1-124-233-11	ELECT	10uF	20%	16V
C615	1-124-233-11	ELECT	10uF	20%	16V
C616	1-124-233-11	ELECT	10uF	20%	16V
C617	1-124-233-11	ELECT	10uF	20%	16V
C622	1-124-589-11	ELECT	47uF	20%	16V
C623	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C701	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C702	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C703	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C705	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C707	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C708	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C709	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C710	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C752	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C753	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C754	1-126-157-11	ELECT	10uF	20%	16V
C755	1-126-157-11	ELECT	10uF	20%	16V
C756	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C781	1-107-885-31	ELECT	3300uF	20%	16V
C782	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C783	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C786	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C787	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C999	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CN301	1-785-694-11	CONNECTOR, FFC/FPC 7P			
* CN351	1-506-995-11	PIN, CONNECTOR (PC BOARD) 13P			
CN581	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)			
CN701	1-794-311-21	PLUG, CONNECTOR 12P			
CN781	1-774-701-11	PIN, CONNECTOR 16P			

MAIN

Ref. No.	Part No.	Description	Remark
		< COMPOSITION CIRCUIT BLOCK >	
CP1	1-803-902-21	PROTECTOR CHIP, SURGE	
		< DIODE >	
D1	8-719-040-04	DIODE MA721WK- (TX)	
D2	8-719-914-42	DIODE DA204K-T-146	
D51	8-719-977-03	DIODE MA8056-M-TX	
D52	8-719-423-10	DIODE MA8100-M-TX	
D351	8-719-422-97	DIODE MA8091-M-TX	
D352	8-719-970-02	DIODE 1SR139-400T-32	
D501	8-719-404-50	DIODE MA111-TX	
D552	8-719-067-56	DIODE MA112-TX	
D581	8-719-057-80	DIODE MA8180-M-TX	
D582	8-719-422-64	DIODE MA8062-M-TX	
D584	8-719-057-80	DIODE MA8180-M-TX	
D585	8-719-072-70	DIODE MA2ZD14001S0	
D586	8-719-057-80	DIODE MA8180-M-TX	
D610	8-719-970-02	DIODE 1SR139-400T-32	
D611	8-719-970-02	DIODE 1SR139-400T-32	
D613	8-719-970-02	DIODE 1SR139-400T-32	
D614	8-719-970-02	DIODE 1SR139-400T-32	
D622	8-719-404-50	DIODE MA111-TX	
D624	8-719-422-64	DIODE MA8062-M-TX	
D703	8-719-109-97	DIODE MA4068-M (TA)	
D704	8-719-109-97	DIODE MA4068-M (TA)	
D705	8-719-109-97	DIODE MA4068-M (TA)	
D706	8-719-034-94	DIODE MA4180-M (TA)	
D707	8-719-109-97	DIODE MA4068-M (TA)	
D708	8-719-109-97	DIODE MA4068-M (TA)	
D709	8-719-109-97	DIODE MA4068-M (TA)	
D710	8-719-977-12	DIODE MA8068-M-TX	
D721	8-719-079-42	DIODE 1ZB22 (TPA3)	
D722	8-719-079-42	DIODE 1ZB22 (TPA3)	
D723	8-719-079-42	DIODE 1ZB22 (TPA3)	
D724	8-719-079-42	DIODE 1ZB22 (TPA3)	
D731	8-719-079-42	DIODE 1ZB22 (TPA3)	
D732	8-719-079-42	DIODE 1ZB22 (TPA3)	
D733	8-719-079-42	DIODE 1ZB22 (TPA3)	
D734	8-719-079-42	DIODE 1ZB22 (TPA3)	
D781	8-719-049-38	DIODE 1N5404TU	
		< IC >	
IC1	8-759-586-59	IC TB2118F (EL)	
IC301	8-752-079-78	IC CXA2509AQ-T4	
IC330	8-759-827-11	IC LC75421M-TLM-E	
IC351	8-759-527-33	IC LB1930M-TLM	
IC501	8-759-828-81	IC MN101C49GTG	
IC551	8-759-682-69	IC XC61CN4302MR	
IC581	8-759-449-89	IC BA8270F-E2	
IC611	8-759-347-49	IC BA3918-V2	
IC751	8-759-827-14	IC TA8268AH	
		< JACK >	
J1	1-815-185-12	JACK (ANT) (FM/AM ANTENNA IN)	
J331	1-774-699-12	JACK, PIN 4P (BUS AUDIO IN, AUDIO OUT)	

Ref. No.	Part No.	Description			Remark
		< SHORT/CAPACITOR/RESISTOR >			
JC1	1-216-295-11	SHORT	0		
JC18	1-216-296-11	SHORT	0		
JC28	1-216-296-11	SHORT	0		
JC41	1-216-296-11	SHORT	0		
JC49	1-216-295-11	SHORT	0		
JC50	1-216-296-11	SHORT	0		
JC51	1-216-295-11	SHORT	0		
JC52	1-216-296-11	SHORT	0		
JC55	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
JC56	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
JC57	1-216-295-11	SHORT	0		
JC58	1-216-295-11	SHORT	0		
JC60	1-216-296-11	SHORT	0		
JC62	1-216-295-11	SHORT	0		
JC63	1-216-295-11	SHORT	0		
JC64	1-216-296-11	SHORT	0		
JC121	1-216-296-11	SHORT	0		
JC141	1-216-296-11	SHORT	0		
JC160	1-216-296-11	SHORT	0		
JC171	1-216-296-11	SHORT	0		
JC172	1-216-296-11	SHORT	0		
JC181	1-216-296-11	SHORT	0		
JC182	1-216-296-11	SHORT	0		
JC251	1-216-296-11	SHORT	0		
JC302	1-216-295-11	SHORT	0		
JC303	1-216-295-11	SHORT	0		
JC330	1-216-296-11	SHORT	0		
JC331	1-216-295-11	SHORT	0		
JC332	1-216-295-11	SHORT	0		
JC333	1-216-296-11	SHORT	0		
JC334	1-216-296-11	SHORT	0		
JC335	1-216-295-11	SHORT	0		
JC336	1-216-296-11	SHORT	0		
JC351	1-216-295-11	SHORT	0		
JC501	1-216-296-11	SHORT	0		
JC502	1-216-295-11	SHORT	0		
JC503	1-216-296-11	SHORT	0		
JC504	1-216-295-11	SHORT	0		
JC505	1-216-845-11	METAL CHIP	100K	5%	1/16W
JC506	1-216-296-11	SHORT	0		
JC520	1-216-296-11	SHORT	0		
JC533	1-216-295-11	SHORT	0		
JC534	1-216-296-11	SHORT	0 (CA420X)		
JC540	1-216-295-11	SHORT	0		
JC541	1-216-295-11	SHORT	0		
JC550	1-216-295-11	SHORT	0		
JC551	1-216-296-11	SHORT	0		
JC552	1-216-295-11	SHORT	0		
JC557	1-216-296-11	SHORT	0		
JC560	1-216-296-11	SHORT	0		
JC561	1-216-296-11	SHORT	0		
JC563	1-216-295-11	SHORT	0		
JC565	1-216-295-11	SHORT	0		
JC576	1-216-296-11	SHORT	0		
JC580	1-216-295-11	SHORT	0		
JC581	1-216-295-11	SHORT	0		

MAIN

Ref. No.	Part No.	Description			Remark
JC582	1-216-295-11	SHORT	0		
JC584	1-216-296-11	SHORT	0		
JC585	1-216-296-11	SHORT	0		
JC586	1-216-296-11	SHORT	0		
JC588	1-216-295-11	SHORT	0		
JC590	1-216-296-11	SHORT	0		
JC601	1-216-295-11	SHORT	0		
JC602	1-216-295-11	SHORT	0		
JC611	1-216-295-11	SHORT	0		
JC612	1-216-295-11	SHORT	0		
JC621	1-216-296-11	SHORT	0		
JC622	1-216-295-11	SHORT	0		
JC705	1-216-295-11	SHORT	0		
JC709	1-216-296-11	SHORT	0		
JC710	1-216-296-11	SHORT	0		
JC752	1-216-296-11	SHORT	0		
JC755	1-216-296-11	SHORT	0		
JC756	1-216-295-11	SHORT	0		
JC782	1-216-296-11	SHORT	0		
		< COIL/SHORT >			
L1	1-410-502-11	INDUCTOR	2.7uH		
L2	1-412-957-11	INDUCTOR	33uH		
L50	1-410-989-11	INDUCTOR	0.47uH		
L51	1-410-509-11	INDUCTOR	10uH		
L58	1-410-509-11	INDUCTOR	10uH		
L59	1-410-509-11	INDUCTOR	10uH		
L100	1-424-759-11	COIL (AM ANT)			
L501	1-410-501-11	INDUCTOR	2.2uH		
L755	1-216-295-11	SHORT	0		
L781	1-419-476-11	INDUCTOR	250uH		
		< TRANSISTOR >			
Q51	8-729-106-68	TRANSISTOR	2SD1664-T100-R		
Q52	8-729-106-68	TRANSISTOR	2SD1664-T100-R		
Q53	8-729-047-76	TRANSISTOR	FMC2A-T148		
Q55	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q171	8-729-920-21	TRANSISTOR	DTC314TK-T-146		
Q181	8-729-920-21	TRANSISTOR	DTC314TK-T-146		
Q271	8-729-920-21	TRANSISTOR	DTC314TK-T-146		
Q281	8-729-920-21	TRANSISTOR	DTC314TK-T-146		
Q351	8-729-015-11	TRANSISTOR	2SD1802FAST-TL		
Q352	8-729-047-76	TRANSISTOR	FMC2A-T148		
Q353	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q354	8-729-106-60	TRANSISTOR	2SB1132-T100-R		
Q551	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q571	8-729-120-28	TRANSISTOR	2SC2412K-T-146-QR		
Q581	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q601	8-729-106-60	TRANSISTOR	2SB1132-T100-R		
Q602	1-801-806-11	TRANSISTOR	DTC144EKA-T146		
Q621	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q622	8-729-021-94	TRANSISTOR	2SK1657-T1B		
		< RESISTOR >			
R1	1-216-821-11	METAL CHIP	1K	5%	1/16W
R3	1-216-811-11	METAL CHIP	150	5%	1/16W
R11	1-216-834-11	METAL CHIP	12K	5%	1/16W
R12	1-216-835-11	METAL CHIP	15K	5%	1/16W
R13	1-216-809-11	METAL CHIP	100	5%	1/16W
R14	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R15	1-216-821-11	METAL CHIP	1K	5%	1/16W
R16	1-216-833-11	METAL CHIP	10K	5%	1/16W
R17	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R18	1-216-841-11	METAL CHIP	47K	5%	1/16W
R51	1-216-821-11	METAL CHIP	1K	5%	1/16W
R52	1-216-813-11	METAL CHIP	220	5%	1/16W
R53	1-216-821-11	METAL CHIP	1K	5%	1/16W
R54	1-216-821-11	METAL CHIP	1K	5%	1/16W
R55	1-216-841-11	METAL CHIP	47K	5%	1/16W
R56	1-216-817-11	METAL CHIP	470	5%	1/16W
R57	1-249-401-11	CARBON	47	5%	1/4W
R60	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R61	1-216-821-11	METAL CHIP	1K	5%	1/16W
R62	1-216-815-11	METAL CHIP	330	5%	1/16W
R101	1-216-817-11	METAL CHIP	470	5%	1/16W
R102	1-216-851-11	METAL CHIP	330K	5%	1/16W
R103	1-216-835-11	METAL CHIP	15K	5%	1/16W
R104	1-216-836-11	METAL CHIP	18K	5%	1/16W
R111	1-216-845-11	METAL CHIP	100K	5%	1/16W
R112	1-216-845-11	METAL CHIP	100K	5%	1/16W
R121	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R141	1-216-833-11	METAL CHIP	10K	5%	1/16W
R142	1-216-809-11	METAL CHIP	100	5%	1/16W
R151	1-216-821-11	METAL CHIP	1K	5%	1/16W
R152	1-216-837-11	METAL CHIP	22K	5%	1/16W
R171	1-216-809-11	METAL CHIP	100	5%	1/16W
R175	1-216-841-11	METAL CHIP	47K	5%	1/16W
R176	1-216-809-11	METAL CHIP	100	5%	1/16W
R177	1-216-821-11	METAL CHIP	1K	5%	1/16W
R181	1-216-809-11	METAL CHIP	100	5%	1/16W
R185	1-216-841-11	METAL CHIP	47K	5%	1/16W
R186	1-216-809-11	METAL CHIP	100	5%	1/16W
R187	1-216-821-11	METAL CHIP	1K	5%	1/16W
R191	1-216-841-11	METAL CHIP	47K	5%	1/16W
R192	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R201	1-216-817-11	METAL CHIP	470	5%	1/16W
R202	1-216-851-11	METAL CHIP	330K	5%	1/16W
R203	1-216-835-11	METAL CHIP	15K	5%	1/16W
R204	1-216-836-11	METAL CHIP	18K	5%	1/16W
R211	1-216-845-11	METAL CHIP	100K	5%	1/16W
R212	1-216-845-11	METAL CHIP	100K	5%	1/16W
R241	1-216-833-11	METAL CHIP	10K	5%	1/16W
R242	1-216-809-11	METAL CHIP	100	5%	1/16W
R251	1-216-821-11	METAL CHIP	1K	5%	1/16W
R252	1-216-837-11	METAL CHIP	22K	5%	1/16W
R271	1-216-809-11	METAL CHIP	100	5%	1/16W
R275	1-216-841-11	METAL CHIP	47K	5%	1/16W
R277	1-216-821-11	METAL CHIP	1K	5%	1/16W
R281	1-216-809-11	METAL CHIP	100	5%	1/16W
R285	1-216-841-11	METAL CHIP	47K	5%	1/16W
R287	1-216-821-11	METAL CHIP	1K	5%	1/16W
R301	1-216-836-11	METAL CHIP	18K	5%	1/16W
R302	1-216-845-11	METAL CHIP	100K	5%	1/16W
R303	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R304	1-216-835-11	METAL CHIP	15K	5%	1/16W
R305	1-216-797-11	METAL CHIP	10	5%	1/16W

MAIN

Ref. No.	Part No.	Description			Remark
R306	1-216-849-11	METAL CHIP	220K	5%	1/16W
R331	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R332	1-216-834-11	METAL CHIP	12K	5%	1/16W
R333	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R334	1-216-834-11	METAL CHIP	12K	5%	1/16W
R350	1-216-809-11	METAL CHIP	100	5%	1/16W
R351	1-216-821-11	METAL CHIP	1K	5%	1/16W
R352	1-249-383-11	CARBON	1.5	5%	1/6W
R353	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R354	1-216-833-11	METAL CHIP	10K	5%	1/16W
R359	1-216-809-11	METAL CHIP	100	5%	1/16W
R360	1-216-809-11	METAL CHIP	100	5%	1/16W
R361	1-216-809-11	METAL CHIP	100	5%	1/16W
R362	1-216-821-11	METAL CHIP	1K	5%	1/16W
R363	1-216-821-11	METAL CHIP	1K	5%	1/16W
R364	1-216-821-11	METAL CHIP	1K	5%	1/16W
R365	1-216-821-11	METAL CHIP	1K	5%	1/16W
R502	1-216-845-11	METAL CHIP	100K	5%	1/16W
R503	1-216-837-11	METAL CHIP	22K	5%	1/16W
R507	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R508	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R509	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R512	1-216-845-11	METAL CHIP	100K	5%	1/16W
R516	1-216-845-11	METAL CHIP	100K	5%	1/16W
R517	1-216-845-11	METAL CHIP	100K	5%	1/16W
R520	1-216-821-11	METAL CHIP	1K	5%	1/16W
R521	1-216-821-11	METAL CHIP	1K	5%	1/16W
R522	1-216-821-11	METAL CHIP	1K	5%	1/16W
R523	1-216-821-11	METAL CHIP	1K	5%	1/16W
R526	1-216-845-11	METAL CHIP	100K	5%	1/16W
R527	1-216-845-11	METAL CHIP	100K	5%	1/16W
R528	1-216-845-11	METAL CHIP	100K	5%	1/16W
R529	1-216-845-11	METAL CHIP	100K	5%	1/16W
R530	1-216-845-11	METAL CHIP	100K	5%	1/16W
R533	1-216-845-11	METAL CHIP	100K	5%	1/16W (CA420X)
R534	1-216-845-11	METAL CHIP	100K	5%	1/16W (CA400)
R535	1-249-417-11	CARBON	1K	5%	1/4W
R536	1-216-845-11	METAL CHIP	100K	5%	1/16W
R537	1-216-845-11	METAL CHIP	100K	5%	1/16W
R538	1-216-813-11	METAL CHIP	220	5%	1/16W
R539	1-216-845-11	METAL CHIP	100K	5%	1/16W
R540	1-216-845-11	METAL CHIP	100K	5%	1/16W
R541	1-216-845-11	METAL CHIP	100K	5%	1/16W
R542	1-216-845-11	METAL CHIP	100K	5%	1/16W
R543	1-216-845-11	METAL CHIP	100K	5%	1/16W
R544	1-216-821-11	METAL CHIP	1K	5%	1/16W
R546	1-216-845-11	METAL CHIP	100K	5%	1/16W
R547	1-216-845-11	METAL CHIP	100K	5%	1/16W
R548	1-216-841-11	METAL CHIP	47K	5%	1/16W (CA420X)
R550	1-216-845-11	METAL CHIP	100K	5%	1/16W
R551	1-216-845-11	METAL CHIP	100K	5%	1/16W
R555	1-208-806-11	RES-CHIP	10K	0.5%	1/10W
R556	1-208-806-11	RES-CHIP	10K	0.5%	1/10W
R557	1-216-845-11	METAL CHIP	100K	5%	1/16W
R558	1-216-813-11	METAL CHIP	220	5%	1/16W
R560	1-216-845-11	METAL CHIP	100K	5%	1/16W
R562	1-216-833-11	METAL CHIP	10K	5%	1/16W
R563	1-216-809-11	METAL CHIP	100	5%	1/16W
R564	1-216-809-11	METAL CHIP	100	5%	1/16W
R565	1-216-845-11	METAL CHIP	100K	5%	1/16W (CA400)
R566	1-216-845-11	METAL CHIP	100K	5%	1/16W (CA420X)
R567	1-216-821-11	METAL CHIP	1K	5%	1/16W
R568	1-216-821-11	METAL CHIP	1K	5%	1/16W
R569	1-216-821-11	METAL CHIP	1K	5%	1/16W
R570	1-216-821-11	METAL CHIP	1K	5%	1/16W
R571	1-216-841-11	METAL CHIP	47K	5%	1/16W
R573	1-249-425-11	CARBON	4.7K	5%	1/4W
R574	1-216-841-11	METAL CHIP	47K	5%	1/16W
R575	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R576	1-216-821-11	METAL CHIP	1K	5%	1/16W
R577	1-216-845-11	METAL CHIP	100K	5%	1/16W
R578	1-216-833-11	METAL CHIP	10K	5%	1/16W
R579	1-216-821-11	METAL CHIP	1K	5%	1/16W
R580	1-216-809-11	METAL CHIP	100	5%	1/16W
R581	1-216-821-11	METAL CHIP	1K	5%	1/16W
R582	1-216-835-11	METAL CHIP	15K	5%	1/16W
R583	1-216-809-11	METAL CHIP	100	5%	1/16W
R584	1-216-805-11	METAL CHIP	47	5%	1/16W
R585	1-216-841-11	METAL CHIP	47K	5%	1/16W
R590	1-216-845-11	METAL CHIP	100K	5%	1/16W
R591	1-216-821-11	METAL CHIP	1K	5%	1/16W
R592	1-216-821-11	METAL CHIP	1K	5%	1/16W
R593	1-216-821-11	METAL CHIP	1K	5%	1/16W
R594	1-216-821-11	METAL CHIP	1K	5%	1/16W
R595	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R596	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R597	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R598	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R601	1-249-397-11	CARBON	22	5%	1/4W
R602	1-249-397-11	CARBON	22	5%	1/4W
R603	1-249-397-11	CARBON	22	5%	1/4W
R604	1-249-397-11	CARBON	22	5%	1/4W
R606	1-216-073-91	RES-CHIP	10K	5%	1/10W
R607	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R608	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R609	1-216-821-11	METAL CHIP	1K	5%	1/16W
R610	1-216-821-11	METAL CHIP	1K	5%	1/16W
R611	1-216-821-11	METAL CHIP	1K	5%	1/16W
R620	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R622	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R623	1-216-805-11	METAL CHIP	47	5%	1/16W
R704	1-216-809-11	METAL CHIP	100	5%	1/16W
R705	1-216-809-11	METAL CHIP	100	5%	1/16W
R706	1-216-821-11	METAL CHIP	1K	5%	1/16W
R707	1-216-821-11	METAL CHIP	1K	5%	1/16W
R708	1-216-821-11	METAL CHIP	1K	5%	1/16W
R710	1-216-797-11	METAL CHIP	10	5%	1/16W
R751	1-249-417-11	CARBON	1K	5%	1/4W
R753	1-216-833-11	METAL CHIP	10K	5%	1/16W

MAIN

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S530	1-571-478-11	SWITCH, SLIDE (FREQUENCY SELECT)	(CA420X)
S551	1-692-431-21	SWITCH, TACTILE (RESET)	
		< THERMISTOR >	
TH501	1-803-350-21	THERMISTOR, POSITIVE	
		< TUNER >	
TU1	1-693-511-11	FM/AM TUNER UNIT (FAE347-A13)	
		< VIBRATOR >	
X1	1-781-246-21	VIBRATOR, CRYSTAL (10.25MHz)	
X501	1-795-134-11	VIBRATOR, CRYSTAL (18.432MHz)	
X502	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)	

MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.2	2001.06	Change of MAIN Board (ECN-CSA04847)
1.1	2001.04	Change of Part No. for SPRING (RELEASE) (ECN-CSA04437)
1.0	2001.01	New